

McKee, R.J. A study of the home and school background of
1948 twenty third grade children...

FOR REFERENCE

Do Not Take From This Room

00000

BOSTON UNIVERSITY
SCHOOL OF EDUCATION

LIBRARY

Ed.

Thesis
McKee, R.J.
1948

The Gift of Robert J. McKee

FOR REFERENCE

Do Not Take From This Room

000000

Stored

BOSTON UNIVERSITY
SCHOOL OF EDUCATION

Thesis

A STUDY OF THE HOME AND SCHOOL BACKGROUND
OF TWENTY THIRD GRADE CHILDREN EXHIBITING
HIGH AND LOW ACHIEVEMENT ON CERTAIN TESTS
OF MOTOR PERFORMANCE

Submitted by

Robert James McKee

(B.S. in Ed., Boston University, 1947)

In Partial Fulfillment of the Requirements
for the Degree of Master of Education

1948

Gift of R.J. McKee
School of Education
June 19, 1948
29482

ACKNOWLEDGMENT

The author wishes to express his appreciation to Dr. G. Lawrence Rarick for his invaluable assistance in the development and preparation of this manuscript.

First Reader Dr. G. Lawrence Rarick

The author also wishes to express his appreciation to Dr. Leslie W. Irwin for his helpful suggestions and criticisms.

Second Reader Dr. Leslie W. Irwin

Third Reader Dr. Helen A. Murphy

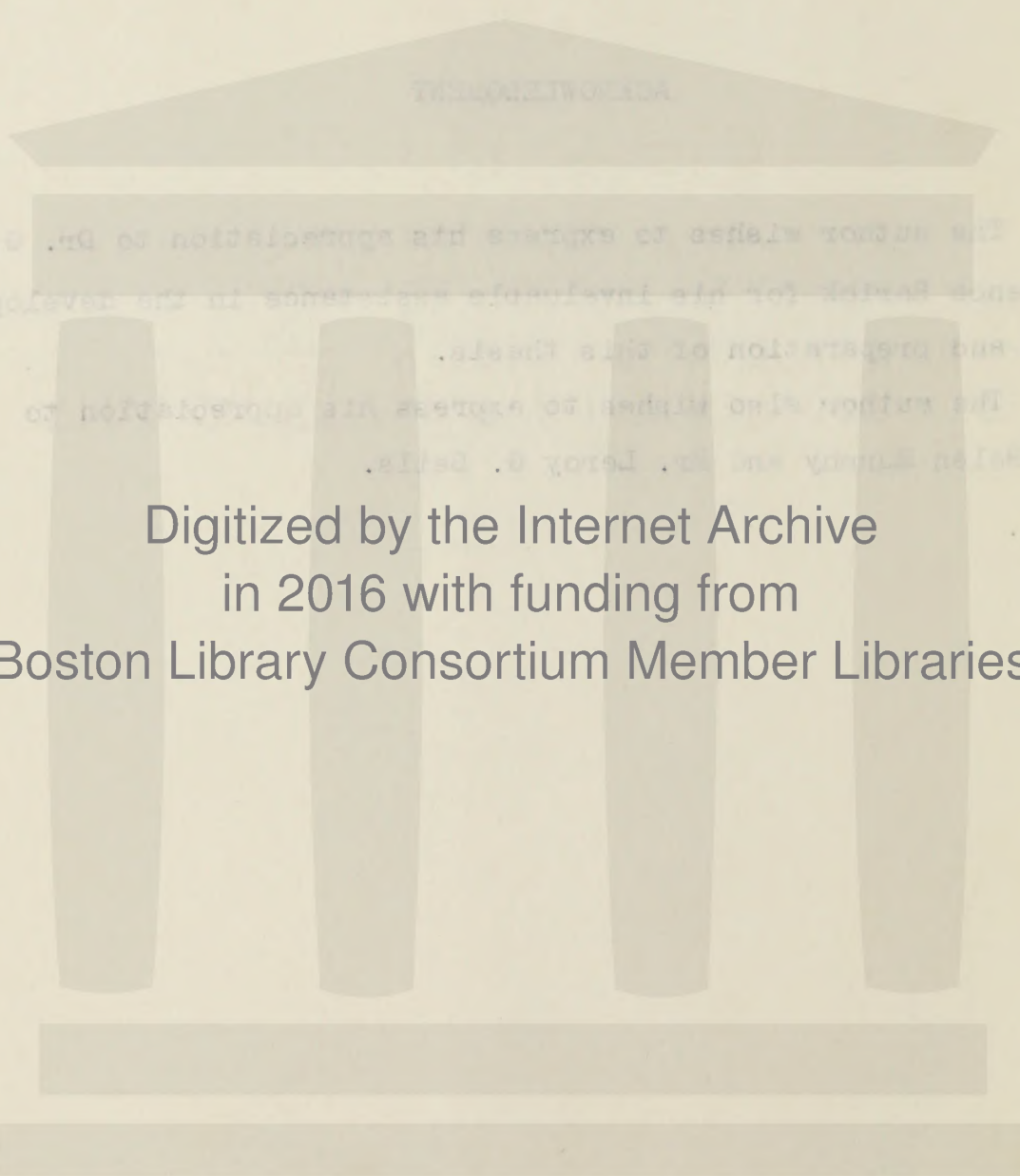
First Reader Mr. O. Lawrence Martin

Second Reader Mr. Leslie M. Linn

Third Reader Mr. Robert E. Wright

TABLE OF CONTENTS

CHAPTER	ACKNOWLEDGMENT	PAGE
I	INTRODUCTION	1
	Purpose	2
	Scope	3
	Statement of the Problem	4
	Significance of the Study	5
	Definition of Terms	6
	Limitations of the Study	7
	Summary	8
	References	9
	Appendix	10
	Bibliography	11
	Index	12
	Glossary	13
	Notes	14
	Footnotes	15
	References	16
	Appendix	17
	Bibliography	18
	Index	19
	Glossary	20
	Notes	21
	Footnotes	22
	References	23
	Appendix	24
	Bibliography	25
	Index	26
	Glossary	27
	Notes	28
	Footnotes	29
	References	30
	Appendix	31
	Bibliography	32
	Index	33
	Glossary	34
	Notes	35
	Footnotes	36
	References	37
	Appendix	38
	Bibliography	39
	Index	40
	Glossary	41
	Notes	42
	Footnotes	43
	References	44
	Appendix	45
	Bibliography	46
	Index	47
	Glossary	48
	Notes	49
	Footnotes	50
	References	51
	Appendix	52
	Bibliography	53
	Index	54
	Glossary	55
	Notes	56
	Footnotes	57
	References	58
	Appendix	59
	Bibliography	60
	Index	61
	Glossary	62
	Notes	63
	Footnotes	64
	References	65
	Appendix	66
	Bibliography	67
	Index	68
	Glossary	69
	Notes	70
	Footnotes	71
	References	72
	Appendix	73
	Bibliography	74
	Index	75
	Glossary	76
	Notes	77
	Footnotes	78
	References	79
	Appendix	80
	Bibliography	81
	Index	82
	Glossary	83
	Notes	84
	Footnotes	85
	References	86
	Appendix	87
	Bibliography	88
	Index	89
	Glossary	90
	Notes	91
	Footnotes	92
	References	93
	Appendix	94
	Bibliography	95
	Index	96
	Glossary	97
	Notes	98
	Footnotes	99
	References	100
	Appendix	101
	Bibliography	102
	Index	103
	Glossary	104
	Notes	105
	Footnotes	106
	References	107
	Appendix	108
	Bibliography	109
	Index	110
	Glossary	111
	Notes	112
	Footnotes	113
	References	114
	Appendix	115
	Bibliography	116
	Index	117
	Glossary	118
	Notes	119
	Footnotes	120
	References	121
	Appendix	122
	Bibliography	123
	Index	124
	Glossary	125
	Notes	126
	Footnotes	127
	References	128
	Appendix	129
	Bibliography	130
	Index	131
	Glossary	132
	Notes	133
	Footnotes	134
	References	135
	Appendix	136
	Bibliography	137
	Index	138
	Glossary	139
	Notes	140
	Footnotes	141
	References	142
	Appendix	143
	Bibliography	144
	Index	145
	Glossary	146
	Notes	147
	Footnotes	148
	References	149
	Appendix	150
	Bibliography	151
	Index	152
	Glossary	153
	Notes	154
	Footnotes	155
	References	156
	Appendix	157
	Bibliography	158
	Index	159
	Glossary	160
	Notes	161
	Footnotes	162
	References	163
	Appendix	164
	Bibliography	165
	Index	166
	Glossary	167
	Notes	168
	Footnotes	169
	References	170
	Appendix	171
	Bibliography	172
	Index	173
	Glossary	174
	Notes	175
	Footnotes	176
	References	177
	Appendix	178
	Bibliography	179
	Index	180
	Glossary	181
	Notes	182
	Footnotes	183
	References	184
	Appendix	185
	Bibliography	186
	Index	187
	Glossary	188
	Notes	189
	Footnotes	190
	References	191
	Appendix	192
	Bibliography	193
	Index	194
	Glossary	195
	Notes	196
	Footnotes	197
	References	198
	Appendix	199
	Bibliography	200
	Index	201
	Glossary	202
	Notes	203
	Footnotes	204
	References	205
	Appendix	206
	Bibliography	207
	Index	208
	Glossary	209
	Notes	210
	Footnotes	211
	References	212
	Appendix	213
	Bibliography	214
	Index	215
	Glossary	216
	Notes	217
	Footnotes	218
	References	219
	Appendix	220
	Bibliography	221
	Index	222
	Glossary	223
	Notes	224
	Footnotes	225
	References	226
	Appendix	227
	Bibliography	228
	Index	229
	Glossary	230
	Notes	231
	Footnotes	232
	References	233
	Appendix	234
	Bibliography	235
	Index	236
	Glossary	237
	Notes	238
	Footnotes	239
	References	240
	Appendix	241
	Bibliography	242
	Index	243
	Glossary	244
	Notes	245
	Footnotes	246
	References	247
	Appendix	248
	Bibliography	249
	Index	250
	Glossary	251
	Notes	252
	Footnotes	253
	References	254
	Appendix	255
	Bibliography	256
	Index	257
	Glossary	258
	Notes	259
	Footnotes	260
	References	261
	Appendix	262
	Bibliography	263
	Index	264
	Glossary	265
	Notes	266
	Footnotes	267
	References	268
	Appendix	269
	Bibliography	270
	Index	271
	Glossary	272
	Notes	273
	Footnotes	274
	References	275
	Appendix	276
	Bibliography	277
	Index	278
	Glossary	279
	Notes	280
	Footnotes	281
	References	282
	Appendix	283
	Bibliography	284
	Index	285
	Glossary	286
	Notes	287
	Footnotes	288
	References	289
	Appendix	290
	Bibliography	291
	Index	292
	Glossary	293
	Notes	294
	Footnotes	295
	References	296
	Appendix	297
	Bibliography	298
	Index	299
	Glossary	300
	Notes	301
	Footnotes	302
	References	303
	Appendix	304
	Bibliography	305
	Index	306
	Glossary	307
	Notes	308
	Footnotes	309
	References	310
	Appendix	311
	Bibliography	312
	Index	313
	Glossary	314
	Notes	315
	Footnotes	316
	References	317
	Appendix	318
	Bibliography	319
	Index	320
	Glossary	321
	Notes	322
	Footnotes	323
	References	324
	Appendix	325
	Bibliography	326
	Index	327
	Glossary	328
	Notes	329
	Footnotes	330
	References	331
	Appendix	332
	Bibliography	333
	Index	334
	Glossary	335
	Notes	336
	Footnotes	337
	References	338
	Appendix	339
	Bibliography	340
	Index	341
	Glossary	342
	Notes	343
	Footnotes	344
	References	345
	Appendix	346
	Bibliography	347
	Index	348
	Glossary	349
	Notes	350
	Footnotes	351
	References	352
	Appendix	353
	Bibliography	354
	Index	355
	Glossary	356
	Notes	357
	Footnotes	358
	References	359
	Appendix	360
	Bibliography	361
	Index	362
	Glossary	363
	Notes	364
	Footnotes	365
	References	366
	Appendix	367
	Bibliography	368
	Index	369
	Glossary	370
	Notes	371
	Footnotes	372
	References	373
	Appendix	374
	Bibliography	375
	Index	376
	Glossary	377
	Notes	378
	Footnotes	379
	References	380
	Appendix	381
	Bibliography	382
	Index	383
	Glossary	384
	Notes	385
	Footnotes	386
	References	387
	Appendix	388
	Bibliography	389
	Index	390
	Glossary	391
	Notes	392
	Footnotes	393
	References	394
	Appendix	395
	Bibliography	396
	Index	397
	Glossary	398
	Notes	399
	Footnotes	400
	References	401
	Appendix	402
	Bibliography	403
	Index	404
	Glossary	405
	Notes	406
	Footnotes	407
	References	408
	Appendix	409
	Bibliography	410
	Index	411
	Glossary	412
	Notes	413
	Footnotes	414
	References	415
	Appendix	416
	Bibliography	417
	Index	418
	Glossary	419
	Notes	420
	Footnotes	421
	References	422
	Appendix	423
	Bibliography	424
	Index	425
	Glossary	426
	Notes	427
	Footnotes	428
	References	429
	Appendix	430
	Bibliography	431
	Index	432
	Glossary	433
	Notes	434
	Footnotes	435
	References	436
	Appendix	437
	Bibliography	438
	Index	439
	Glossary	440
	Notes	441
	Footnotes	442
	References	443
	Appendix	444
	Bibliography	445
	Index	446
	Glossary	447
	Notes	448
	Footnotes	449
	References	450
	Appendix	451
	Bibliography	452
	Index	453
	Glossary	454
	Notes	455
	Footnotes	456
	References	457
	Appendix	458
	Bibliography	459
	Index	460
	Glossary	46



ACKNOWLEDGMENT

The author wishes to express his appreciation to Dr. G. L. Lawrence for his invaluable assistance in the development and preparation of this thesis.

The author also wishes to express his appreciation to Dr. Helen Murray and Mr. Leroy G. Bell.

Digitized by the Internet Archive
in 2016 with funding from
Boston Library Consortium Member Libraries

TABLE OF CONTENTS

CHAPTER		PAGE
I	INTRODUCTION	1
	Purpose	2
	Scope	2
	Limitations	4
	Summary of Previous Research	4
II	PROCEDURE	17
	Determination and Selection of Superior and Inferior Gross Motor Performers	17
	Procedure for Investigation	19
	Development of Teacher Interview Instrument	20
	Development of Parent Interview Instrument	24
	Interview Procedure	30
III	ANALYSIS OF DATA	32
IV	SUMMARY AND CONCLUSIONS	65
	Educational Implications	70
V	SUGGESTIONS FOR FURTHER STUDY	72
	BIBLIOGRAPHY	74
	APPENDIX	
	A	78
	B	79
	C	81
	D	83

LIST OF TABLES

TABLE		PAGE
I	A Synopsis of the School Records of the Twenty Selected Cases	34
II	An Evaluation of the Classroom Ability and Mannerisms of the Twenty Selected Cases, as Disclosed in the Teacher Interview.	36
III	An Analysis of the Social Behavior of the Twenty Selected Cases as Revealed in the Teacher Interview	38
IV	A Compilation of Personality Factors of the Twenty Selected Cases as Revealed in the Teacher Interview	40
V	A Description of the Parental Background and Number of Siblings of the Twenty Selected Cases	44
VI	An Analysis of the Physical Development and Physical Response of the Twenty Selected Cases.	47
VII	A Description of Infant-Childhood Illnesses of the Twenty Selected Cases	49
VIII	An Evaluation of the Homes and Home Activity of the Twenty Selected Cases	52
IX	A Description of Home, Playground and Summer Play Provisions of the Twenty Selected Cases.	54
X	A Synopsis of the Use of Play Materials, Interests and Ability of the Twenty Selected Cases	58
XI	A Description of the Play Relations and Quality of Activity of the Twenty Selected Cases	61
XII	A Comparison of the Age, Height, Weight, and Grip Strength of the Twenty Selected Cases.	63

CHAPTER I

INTRODUCTION

Observation of school children at any one particular grade level discloses marked differences in levels of gross motor performance and skill. Many of these differences may be due to innate factors, where many are probably due to environmental influences. Anderson¹ aptly expressed this when he opined that:

"If the organism is a product of hereditary and environmental factors working together, that which is left behind in the individual after the environment has operated for any given period of time may be looked upon as a series of skills perfected to varying degrees. The environment furnishes the stimulation and the occasion for the development of the skill. The inherited characteristics of the individual determine, under a given amount of environmental stimulation, the level and the limit to which the skill can be developed. The environment determines the extent to which the skill is developed."

The degree to which these skills are perfected in any child is of the utmost importance, for successful living consists largely in ability to control one's physical environment and adjust to it. As Kawin² was wont to write:

"In addition to the building of health, which is of basic importance to life itself, activities dependent upon development of strength and skill

1. John E. Anderson, Mimeographed Materials Prepared for a Conference on Research in Child Development, Part I. Toronto, Canada, 1929, p. 144-162.

2. Ethel Kawin, The Wise Choice of Toys, University of Chicago Press, Chicago, Illinois, 1938, p. 63.

make rich contributions to many varied aspects of personality development. The child who possesses ability to run, jump, climb and so on, has valuable resources for adjusting to his environment, for amusing himself, and also for making effective social contacts with his fellows."

In brief, motor ability serves to train and maintain a well-integrated personality.

Purpose. Recognizing that differences do exist between individuals in gross motor skill at any one grade level, it is the purpose of this investigation to study twenty selected third grade pupils in an effort to determine reasons for the individual's superior or inferior performance upon a particular gross motor skill performance test. It is hoped that from a description and analysis of the factors disclosed, further insight may be gained into the relationship of hereditary and environmental influences upon motor ability. It is also anticipated that suggestions and considerations in aiding and assisting the development of motor skill in young children may be drawn from this analysis.

Scope. The scope of this study may be divided into three main categories:

- (1) A determination of superior and inferior gross motor skill performance of twenty third grade pupils (ten boys, ten girls).
- (2) A study of the effects of parental background, physical background, educational experience, and play activities of the selected cases as

factors contributing to the relative degree of motor skill.

- (3) An analysis of these factors in relation to superiority and inferiority in gross motor skill.

In determining and selecting the twenty cases to be investigated and reviewed, one hundred and seventy-two third grade pupils were given one series of gross motor performance tests.¹

Upon completion of the testing, each pupil's performance was scored and the ten most superior and ten most inferior performers (five girls and five boys in each group) were selected for this study. The reliability and validity of the test items were established in an earlier study.² Standard and accepted statistical methods and procedures were utilized in selecting the particular cases for study.

It was felt that the most informative and accurate method of investigation of the areas mentioned would be to interview each parent and teacher of the selected cases. To facilitate this procedure, a check list or guide sheet was devised to direct the interview. Copies of these instruments appear in the Appendix, that the reader might consult them to note the extent to which each area mentioned

1. (The tests referred to are described in the unpublished Doctoral Dissertation of Leroy G. Seils, Boston University, 1948.)

2. Leroy G. Seils, Study to Determine the Relationship between Physical Growth Measures and Gross Motor Performance of Primary School Children. Unpublished Dissertation, Boston Univ., 1948.

was covered. The explanation for inclusion of the items is described in Chapter II - Procedure.

Limitations. Necessarily, because of the relatively few cases, this study is limited, and any conclusions that are drawn are applicable only insofar as the cases studied are representative.

It must be recognized, too, that due to the nature of this study, it was impossible to discover, include and exhaust all factors that might possibly be associated with the development and achievement of gross motor skill.

It was also a little difficult for the writer to remain completely objective in his interpretations and analysis of the interview content, due to the subjective nature of much of the material, but in all instances the writer approached and tabulated the material as objectively as possible.

Summary of Previous Research. Numerous studies have been conducted wherein measurement of motor achievement in relation to its learning, physical growth and development were made, but as Gutteridge¹ reports: "In individual cases where there is apparent retardation in motor ability, study is needed in order to determine whether this is due to retarded physical development or to lack of opportunity suited to varying individual needs." In a similar vein, study is

¹ L. M. E. Breckenridge and E. L. Vincent, Child Development, W. B. Saunders Company, Philadelphia, 1943, p. 301-302.

also needed to determine those factors which definitely contribute to a superior or inferior performance in relation to motor achievement. The question of just what motor achievement entails and results from is a noteworthy point of discussion.

"Motor achievement," as pictured by Jersild¹, "represents an interrelation of many factors, among the more obvious being strength, speed, size and anatomical build."

Studies, as will be mentioned later, have also recognized the influence upon motor performance of such elusive factors as interest, self-confidence, tendency to be intrepid or fearful, the interplay of personality factors, diminished opportunity of physical activity, lack of environmental stimulation, and so on. Factors of physical, social, psychological and emotional influence can hardly be minimized in considering the acquisition and achievement in motor skill.

Carmichael² reports that in the acquisition of skills, although some develop primarily as a result of maturation and others primarily as a result of learning, the two processes are reciprocally related.

"Investigations of the relative influence of maturation and learning in acquisition of motor

1. A. T. Jersild, Child Psychology, Prentice-Hall, Inc., New York, 1947, p. 116.

2. L. Carmichael, Manual of Child Psychology, John Wiley & Sons, Inc., New York, 1946, p. 380.

skills have demonstrated that at early age levels and for skills that are simple or which show little short-time improvement from either maturation or practice, the effect of increasing maturation is to make given amounts of practice increasingly effective."

In a study conducted by Hicks,¹ in which a control and practice group of children ranging from two and one-half to six and one-half years were tested in throwing at a moving target, the conclusions drawn were such that improvement in skill was not primarily from practice; other factors, such as structural maturation and general practice, which had direct bearing on the specific skill, were evidenced. This would substantiate what Carmichael² further offered when he said that it is reasonable to suppose that older children, having a sensory, neural and muscular system of greater maturity, should profit more from given amounts of practice than younger children, and that the older child has a wider previous experience upon which to draw in acquiring new skills.

Halverson³ reported, with respect to the acquisition of skill, that it is largely a modification and fusion of a set of reflex and acquired activities, related and unrelated

1. J. H. Hicks, "Acquisition of Motor Skill in Young Children," Child Development, 1:90-105 (1930).

2. Carmichael, op. cit., p. 385.

3. H. M. Halverson, "Acquisition of Skill in Infancy," Journal of Genetic Psychology (Sept., 1933), 43: 3-48.

skills have demonstrated that at early age levels and for skills that are simple or which show little or no improvement from either practice or repetition, the effect of practice repetition is to make given amounts of practice increasingly effective.

In a study conducted by Hicks,¹ in which a control and practice group of children ranging from two and one-half to six and one-half years were tested in throwing at a moving target, the conclusions drawn were such that improvement in skill was not primarily from practice; other factors, such as attentional motivation and general practice, which had direct bearing on the specific skill, were evidenced. This would substantiate what Carmichael² further offered when he said that it is reasonable to suppose that older children, having a sensory, neural and muscular system of greater maturity, should profit more from given amounts of practice than younger children, and that the older child has a wider previous experience upon which to draw in acquiring new skills.

Holmstrom³ reported, with respect to the acquisition of skill, that it is largely a modification and fusion of a set of reflex and acquired activities, related and unrelated.

1. J. E. Hicks, "Acquisition of Motor Skill in Young Children," *Child Development*, 1:30-135 (1930).

2. Carmichael, op. cit., p. 385.

3. J. E. Holmstrom, "Acquisition of Skill in Intensity," *Journal of Genetic Psychology* (Sept., 1933), 43: 3-12.

functionally, into a fluent movement cortically controlled.

It is impossible to review the voluminous studies that have been conducted to ascertain the effects of training in relation to maturity. Gesell¹ has probably contributed the greatest amount of insight into this consideration. In one study, involving twins at forty-six weeks, one was encouraged daily for a six-week period to manipulate and use cubes, the other denied this experience. At fifty-two weeks, the behavior of the two children in this experience was highly similar.

Dennis² illustrated this point of view in his study wherein two girls were kept in a very restricted environment until they were seven months old, and yet the progress of these children did not substantially differ from the progress made by other children in a normal environment. It is recognized that were this regimen continued beyond the age of seven months, no doubt the deprivation effect would retard the children in a number of performances.

Development, and therein a degree of achievement, is a product of growth and learning. Within these two classifications fall countless factors and influences, and as concomitant results, variations and differences. Behavior, the

1. A. Gesell and H. Thompson, "Learning and Growth in Identical Infant Twins," An Experimental Study by the Method of Co-Twin Control, Genetic Psychology Monographs (1929), 6: 1-124.

2. W. Dennis, "Infant Development under Conditions of Restricted Practice and of Minimum Social Stimulation," A Preliminary Report, Journal of Genetic Psychology (1938), 53:149-157.

functionally, that a fluent movement cortically controlled.

It is impossible to review the voluminous studies that

have been conducted to ascertain the effects of training in

relation to maturity. Gessell¹ has previously conducted the

quickest amount of insight into this consideration. In one

study, involving twins at forty-six weeks, one was encouraged

daily for a six-week period to manipulate and use cubes, the

other denied this experience. At fifty-two weeks, the be-

havior of the two children in this experience was highly

similar.

Dennis² illustrated this point of view in his study

wherein two girls were kept in a very restricted environment

until they were seven months old, and yet the progress of

these children did not substantially differ from the prog-

ress made by other children in a normal environment. It is

recognized that were this regimen continued beyond the age

of seven months, no doubt the deprivation effect would retard

the children in a number of performances.

Development, and therein a degree of achievement, is a

product of growth and learning. Within these two classifi-

cations fall countless factors and influences, and as con-

stant results, variations and differences. Behavior, the

J. A. Gessell and H. Thompson, "Learning and Growth in

Identical Infant Twins," an experimental study by the method

of Co-Twin Control, Genetic Psychology Monographs (1929),

8: 1-124.

S. W. Dennis, "Infant Development under Conditions of Re-

stricted Freedom and of Limited Social Stimulation," A Pre-

expressive of development, is described by Dewey¹ as "an adequate adjustment to the environment." The different skills are developed concurrently although there is apparently a level in use of the old skills where at times new ones serve to energize these old ones, therefore patterns overlap and dovetail into one another." As Gesell² expressed it, "there are stages and phases and a perpetual knitting together of what happens and happened."

Richardson³ opines that success in adaptive behavior is influenced by perceptive and emotional attitudes toward the whole situation as well as by motor capacity of the child. In this, then, we see factors influencing achievement well beyond the importance of only physical growth or development, and yet Munn⁴ cautions that the efficacy of exercise or special training is directly proportional to the degree of maturation of the underlying mechanism.

1. E. Dewey, Behavior Development in Infants. Columbia University Press, New York, 1935, p. 303.

2. A. Gesell, Infancy and Human Growth. MacMillan, New York, 1928, p. 22.

3. H. Richardson, "Growth of Adaptive Behavior in Infants," An Experimental Study of Seven Age Levels, Genetic Psychological Monographs (1932), Vol. 12, Nos. 3-4, p. 195-359.

4. Norman L. Munn, Psychological Development. Houghton, Mifflin Company, Boston, 1938, p. 224.

From the study of Johnny and Jimmy, McGraw¹ came to the conclusion that there are adventitious periods during which time the acquisition of a particular performance may be most economically accomplished. Probably first as a factor upon which this depends is good physical health and adequate bone and muscle development, but certainly there are other extraneous factors which cannot be overlooked.

As Roberts² observed, children provided with more adapted and primary play materials tend to become more constructive and dramatic in their play activities, and those lacking play material were related to undesirable emotional behavior and evidenced a certain amount of inhibited activity.

Gates and Taylor³ equated groups of young children with a battery of motor tests. One group was then controlled in a tapping experiment and the other designated to certain practice sessions. They concluded that improvement brought about by practice was due to other than just mental and muscular adaptations to the task. Such factors as methods of work, conditioning to the test, and techniques of various sorts resulting from the experience, greatly facilitated the

1. M. B. McGraw, Growth: A Study of Johnny and Jimmy. D. Appleton-Century Company, New York, 1935, p. 255.

2. Mary D. Roberts, "A Study of Child's Play in the Home Environment", University of Iowa Studies in Child Welfare, (1934), Vol. 8, Part 2, p. 71-90.

3. A.I. Gates and G. Taylor, "An Experimental Study in the Nature of Improvement from Practice in a Motor Function," Journal of Educational Psychology (1926), 17: 226-236.

From the study of Johnson and Jimmy, Roberts² came to the conclusion that there are significant periods during which the acquisition of a particular performance may be most economically accomplished. Probably first as a factor upon which this depends is good physical health and adequate home and social environment, but certainly there are other extraneous factors which cannot be overlooked.

As Roberts² observed, children provided with more adapted and primary play materials tend to become more constructive and dramatic in their play activities, and those lacking play material were related to undesirable emotional behavior and evidenced a certain amount of inhibited activity.

Garce and Taylor³ separated groups of young children with a battery of motor tests. One group was then controlled in a teaching experiment and the other assigned to certain practice sessions. They concluded that improvement brought about by practice was due to other than just mental and motor adaptations to the task. Such factors as methods of work, conditioning to the test, and techniques of various sorts resulting from the experience, greatly facilitated the

1. J. B. Watson, *Psychology*, 2nd ed., Little, Brown, 1927, p. 237.
 2. Mary P. Roberts, "A Study of Child's Play in the Home Environment," University of Iowa Studies in Child Welfare, (1934), Vol. 3, Part 2, p. 71-75.
 3. J. A. I. Garce and G. Taylor, "An Experimental Study in the Nature of Improvement from Practice in a Motor Function," *Journal of Educational Psychology* (1932), 17: 225-235.

improvement. Proficiency was due partly to capacity, inner growth, and partly due to adjustment to the task and knowledge of procedure as a result of practice and experience. However, after a lapse of six months in which no practice was experienced, the two groups when retested showed no striking difference between them.

The studies so far reviewed indicate that an opportunity for concentrated practice, or the deprivation of practice or experience, are not substitutes for the changes that come with growth or such practice as a child receives incidentally in the course of his every day life. Jersild¹ has listed several principles in relation to development and the achievement of children. The principle of indigenous motivation which states that an integral feature of development or power is a tendency to use that capacity or power, can perhaps summarize the thinking in regard to achievement with respect to maturation and learning. The interaction among various aspects of motor, mental, social and emotional development cannot be overlooked, however, and for that reason the following reviews will serve to bring these factors to light.

Damann², in a study of the responses of a child to an opportunity to climb an inclined board, conclusively illus-

1. A. T. Jersild, op. cit., p. 51.

2. V. T. Damann, "Developmental Changes in Attitude as One Factor Determining Energy Output in a Motor Performance", Child Development (1941), 12: 241-246.

development. Proficiency was due partly to capacity, inner growth, and partly due to adjustment to the task and knowledge of procedure as a result of practice and experience. However, after a lapse of six months in which no practice was experienced, the two groups when retested showed no striking difference between them.

The studies so far reviewed indicate that an opportunity for concentrated practice, or the deprivation of practice or experience, are not substitutes for the changes that come with growth or such practice as a child receives incidentally in the course of his every day life. Javelle has listed several principles in relation to development and the achievement of children. The principle of alignment motivation which states that an integral feature of development or power is a tendency to use that capacity or power, can perhaps summarize the thinking in regard to achievement with respect to motivation and learning. The interaction among various aspects of motor, mental, social and emotional development cannot be overlooked, however, and for that reason the following review will serve to bring these factors to light.

Barnard, in a study of the responses of a child to an opportunity to climb an inclined board, conclusively illustrates these factors to light.

1. A. T. Javelle, op. cit., p. 51.

2. V. T. Barnard, "Developmental Changes in Attitude as the Factor Determining Motor Behavior in a Motor Performance", Child Development (1931), 12: 201-205.

trated that developmental changes with reference to a motor performance are definitely influenced by interest and attitude.

Goodenough and Brian¹ brought to light other considerations in the acquisition of motor skills in young children. Three groups were divided in a ring toss experiment so that one received no instruction, the other preliminary demonstration and verbal criticism, while the third was shown a definite procedure and not allowed to deviate from the standard technique. Factors influencing the success of the performers were seen to be: (1) emotion, wherein overconfidence or undue caution was exhibited in inferior performance; (2) setting up constant forms of undesirable motor procedure with subsequent deterioration in performance as practice and error continued; (3) false association of cause and effect, exemplified by a child standing on tiptoe and raising arm overhead to have ring travel in a higher arc; (4) peculiar association of meaning with verbal expressions of instructor, exemplified by a child throwing the ring more violently when told to try harder; (5) incorrect focussing of attention; and (6) frequent random changes in procedure without adhering to any one particular motor pattern involved. The authors concluded with this statement:

"Associations are formed more rapidly between acts or events which are nearer together in point

1. F. L. Goodenough and C. R. Brian, "Certain Factors Underlying the Acquisition of Motor Skills in Pre-School Children," Journal of Exper. Psychology, 12:127-155 (1929).

of time than those chronologically remote. Improvement then may in part be dependent upon the ability of the individual to maintain a kind of kinaesthetic orientation or set enabling him to reproduce with comparative exactitude those actions proved to be successful, as over chance."

Wellman¹ in reporting of motor coordination in young children, noted that there was a marked increase of motor control with age, and a positive relationship with general mental ability. Superior performance was, on the whole, experienced by those children of superior environment. Gesell and Lord² similarly noted, in a comparative study of children from high and low economic status, that the child of the higher socio-economic status tended to be more spontaneous and expressive in his play activity. Johnson³ observed that the more extensively equipped playgrounds were characterized by play of children wherein greater amounts of bodily exercise and activity were displayed.

Breckenridge and Vincent⁴ in their chapter on motor control, opined the following with respect to factors influencing achievement in motor skills:

1. B. Wellman, "An Experimental Study in Control of Hand and Arm Movement", *Motor Coordination in Young Children*, University of Iowa Studies in Child Welfare, Vol. 3, No. 4, 1926, p. 11.

2. A. Gesell and Lord, "A Psychological Comparison of Nursery School Children from Homes of High and Low Economic Status", *Pedagogical Sem.*, 34:339-356 (Sept. 1927).

3. M. W. Johnson, "Effect on Behavior of Variations in Amount of Play Equipment", *Child Development*, 6:56-68 (1935).

4. M. E. Breckenridge and E. L. Vincent, *op. cit.*, p. 278.

"Emotional factors are important. Severe accidents may produce timidity; illness may rob the child not only of physical strength, but also of normally active aggressiveness; too great anxiety on the part of adults that the child hurt himself may make him overanxious about the dangers of bumps without which bodily skill can scarcely be achieved. . . . A few children, lacking a vigorous interest in learning new things, may prove slow in acquiring motor skills because they have no need to get about, since everything is brought within their reach and they enjoy the coddling better than the adventure involved in finding things for themselves. . . . In all learning of motor skills, children need health, vigor, opportunity to experiment, freedom to adventure, and the satisfaction of adult encouragement."

Jersild¹ continued in this vein in his concluding and summarizing remarks when he stated that:

"Proper facilities and opportunities with judicious instruction where warranted, therefore not only can help to give the child more skill and mastery over his physical environment at a given time, but may also provide the impetus for further ventures on his part. . . . Apart from a child's own initial interest in using his body and his limbs, an important factor is the social influence of other children. The example and incentive provided by other children may lead the child into endeavors that he would not undertake if left to himself or exclusively in the company of older persons. . . . Sometimes a vicious cycle may be started when a child, for one reason or another, falls behind his group; he becomes reluctant to join in the group games, and the more he stays away, the greater becomes the difference between his skill and that of the other children, for they continue to practice and to learn."

Theresa Jones,² in her study of the development of certain motor skills and play activities in young children, has

1. Jersild, op. cit., p. 119.

2. T. D. Jones, "The Development of Certain Motor Skills and Play Activities in Young Children", Child Development, Monog. 26, Teachers College, Columbia Univ., New York, (1939).

most closely approached the purpose for which this writer's study was conducted. Although her study concentrated on the use of wheel toys and child behavior in relation to the activity motivated by their use, as a by-product of her study she disclosed several factors related to play behavior that may have a particular interest when viewed in the light of factors possibly influencing the motor achievement of young children.

It was observed and generalized from her study that the retarded children in relation to play activity tended to be of a lower socio-economic background, and had adults other than the parents living in their homes. The children were, on the whole, either only children, or the younger of two. Living on hillsides or other precarious ways, the children demanded close supervision and were quite limited as far as space and play facilities were concerned. Parents of these children appeared to be of a protective and dominating nature, and ones in whom the child placed much dependence. Nervousness and expressions of tension were marked in each youngster, and it was easily seen that they received much lavish attention and coddling.

In comparison, the accelerated children had, as a general tendency, two or more siblings, no adults as constant companions or playmates, and had much greater opportunity and facilities for play. The children appeared, on

the whole, to be much better adjusted youngsters.

Factors observed in relation to the children's play activity were summarized as follows: Ownership of wheel play materials appeared to be a significant factor in promoting acceleration in their use. The influence of playmates was seen possibly to promote advanced performance with the wheel toys, and those children with previous experience with a wagon, doll carriage, kitty car, and so on, made for better performers.

In general, heavier and taller children covered more space and were more active in their play activity. Adequate diet correlated with the high activity play of children, with a positive .37. There was a tendency for the brighter children, of better environment and greater opportunity for guidance, to be in the accelerated group.

Concluding statements by Jones, in relation to her study, expressed the following:

Experience with play material and association with playmates tended to make children more self-reliant and active in their play. The physical and mental condition of youngsters affected the tempo at which the children played, and familial and emotional traits appeared to play a large part in the shaping of the personality that the child expressed in his play activities. Those displaying spontaneity in play activity were found to be of the same

nature in the home. Association between freedom from restraint and greater use of play material was seen in accelerated performance, as over those who were under constant supervision and appeared inhibited in their play. Those unrestricted, likewise appeared socially independent and less emotional.

In specific relationship to the experiment conducted, she summarized her findings with the following comments:

"Level of performance is a function of increase of maturity as distinguished from experience or practice alone.

"The quality of play is largely dependent upon intrinsic factors related to growth or development, and . . the ability for use of material depends upon neuromuscular maturity, the skill in use depending upon continued practice."

CHAPTER II

PROCEDURE

The main purpose of this study deals with the actual investigation of the twenty selected cases. Description of the test, method of administration, and considerations in selecting and testing over five hundred primary school children, will here be only touched upon. The reader who may wish more specific and detailed information regarding the over-all testing procedure is referred to the unpublished doctoral dissertation of Seils¹, Boston University, School of Education, 1948.

Determination and Selection of Superior and Inferior Gross Motor Skill Performers. Gross motor skill is here referred to as the function of "big muscles" of the skeletal muscular system in carrying out a particular pattern of movement. This functioning is in relation to coordinated movement of body segments and propulsion of the body or objects.

The gross motor tests used in this study included tests of running, jumping, throwing, striking, catching, agility and balance.

One hundred and seventy-two third grade pupils (82 girls,

1. Seils, op. cit.

CHAPTER II

PROCEDURE

The main purpose of this study deals with the normal investigation of the twenty selected cases. Description of the test, record of administration, and considerations in selecting and testing over five hundred primary school children, will have been only touched upon. The reader who may wish more specific and detailed information regarding the over-all testing procedure is referred to the unpublished doctoral dissertation of Belle¹, Boston University, School of Education, 1943.

Measurement and Selection of Superior and Inferior

Gross Motor Skill Performers. Gross motor skill is here referred to as the function of "big muscles" of the skeleton-skeletal system in carrying out a particular action of movement. This functioning is in relation to coordinated movement of body segments and propulsion of the body or objects.

The gross motor tests used in this study included tests of running, jumping, throwing, striking, catching, agility and balance.

One hundred and seventy-two third grade pupils (85 girls,

1. Belle, op. cit.

90 boys) were tested. It was decided to restrict this investigation to third grade pupils, for several reasons. At the third grade level, it can be reasonably assumed that the child has completed the initial adjustment from the home into the school. In a like consideration, the primary school child has, by this time, already been influenced by at least two years of schooling experience. In regard to motor development, as suggested by Kawin¹, by the time a child has reached the age of seven, most of the basic motor skills have been completely established, and as indicated by tests, his sensory equipment is about as complete at the age of nine at the latest, as it ever will be. Inasmuch as the ages of third grade pupils fall within this general classification, the pupils of the third grade were therefore selected for investigation, rather than the first or second grade pupils.

It is also recognized, from the findings as reported in the study conducted by Seils², that the range of performance in motor ability is not so great in primary school children of the third grade as in the first or second grades, thereby more nearly assuring the selection of superior and inferior performers.

In the present study, recognizing a sex difference in

1. Kawin, op. cit., p. 59.

2. Seils, op. cit.

(30 boys) were tested. It was decided to restrict this investigation to third grade pupils, for several reasons. At the third grade level, it can be reasonably assumed that the child has completed the initial adjustment from the home into the school. In a like consideration, the primary school child has, by this time, already been introduced by at least two years of schooling experience. In regard to motor development, as suggested by Kassin¹, by the time a child has reached the age of seven, most of the basic motor skills have been completely established, and as indicated by tests, his sensory equipment is about as complete at the age of nine at the latest, as it ever will be. Inasmuch as the ages of third grade pupils fall within this general classification, the pupils of the third grade were therefore selected for investigation, rather than the first or second grade pupils.

It is also recognized, from the findings as reported in the study conducted by Belle², that the range of performance in motor ability is not so great in primary school children of the third grade as in the first or second grades, thereby more nearly assuring the selection of superior and inferior performers.

In the present study, recognizing a sex difference in

1. Kassin, op. cit., p. 59.

2. Belle, op. cit.

motor performance at this grade level, it was decided to treat the data gathered according to this classification. Accordingly, the performance of females in the seven areas previously mentioned were statistically treated, so that a mean score and standard deviation were arrived at for each test item. This was done for the male group as well. Z scores were then calculated for each of the performers on each of the test items, which, when totaled, gave a total gross motor ability score for the one hundred and seventy-two children. Those pupils with the ten highest GMAS, and the ten lowest GMAS, five boys and five girls in each group, were then selected for investigation and further study.

The reader is referred to the Appendix for a chart of the selection of the twenty cases for study, the statistical method and conclusions being shown thereon.

Procedure for Investigation. In developing and considering studies of factors surrounding the development of gross motor ability or skill, reference to previous research, review of current literature, and interview of prominent people associated with child study were instrumental in selecting and determining the areas and specific factors for investigation.

It seemed reasonable to assume that physical growth and development are associated with the degree to which perfection in any series of skills is attained. The role which

motor performance at this grade level, it was decided to treat the data gathered according to this classification. Accordingly, the performance of females in the seven areas previously mentioned were statistically treated, so that a mean score and standard deviation were arrived at for each

test item. This was done for the male group as well. Scores were then calculated for each of the performers on each of the test items, which, when totaled, gave a total gross motor ability score for the one hundred and seventy-two children. Those pupils with the ten highest GMA's, and the ten lowest GMA's, five boys and five girls in each group, were then selected for investigation and further study.

The reader is referred to the Appendix for a chart of the selection of the twenty groups for study, the statistical method and conclusions being shown thereon.

Procedure for investigation. In developing and conducting studies of factors surrounding the development of gross motor ability or skill, reference to previous research, review of current literature, and interview of prominent people associated with child study were instrumental in selecting and determining the areas and specific factors for investigation.

It seemed reasonable to assume that physical growth and development are associated with the degree to which participation in any series of skills is obtained. The role which

environmental influence acts in the development of any function similarly seemed unquestionable. In that the most significant agents in any child's environment at an early age are the home, school and community, these three areas, in addition to the physical background, were selected for investigation.

In order that a degree of uniformity and accuracy could be achieved in interviewing the parents and teachers, as well as listing any data from home and school records, the instruments as referred to in the Appendix were designed.

A trial interview was conducted with two parents and teachers not related to the investigation, so that the writer might approximate the difficulty involved in having the specific factors investigated. It was by this medium that the instruments were streamlined and arranged more efficiently.

The cases once selected, arrangements were made to interview each of the respective teachers, and it was from the information received in this manner, plus the school records, that a schedule for the parent interviews was prepared.

Development of Teacher Interview Instrument. The importance and influence of the school in a child's development and adjustment in preparation for successful living can hardly be questioned. The training and experience

environmental influence acts in the development of any individual. It is that the individual is not a passive recipient of his environment but an active participant in it. In addition to the physical background, there are three areas, namely the home, school and community, which are selected for investigation.

In order that a degree of uniformity and accuracy could be achieved in interviewing the parents and teachers, as well as listing any data from home and school records, the instrument as referred to in the Appendix was designed.

A trial interview was conducted with two parents and teachers and related to the investigation, so that the writer might approximate the difficulty involved in having the specific factors investigated. It was by this medium that the instruments were streamlined and arranged more efficiently.

The cases once selected, arrangements were made to interview each of the respective teachers, and it was from the information received in this manner, plus the school records, that a schedule for the parent interviews was prepared.

Development of Teacher Interview Instrument. The importance and influence of the school in a child's development and adjustment is unquestioned for successful living can hardly be questioned. The training and experience

gained assists in the development of the "whole personality," and no one skill or mastery is distinct in itself. It is a process of interrelation, and as Jones¹ concludes, "from the very fact that the individual is an organism and not a piece-meal combination of elements, it follows that any structure and function may have a significant relationship to any other structure or function and to the total stream."

It is impossible to say what any one factor definitely contributes to the development of gross motor ability, but perhaps through an investigation of several areas of a child's experience, when seen in analysis with others, possible influences may be discovered. It was with this thought in mind that the following factors were selected for investigation of the educational experience of each selected case.

As Breckenridge and Vincent² reported on Todd's study, "the child whose physical development is retarded lacks that biologic slate on which the experience of his years should be registered." Certainly, physical limitations restrict achievement, and for that reason, the recording of any physical defects or observations on the child's school health record was included in the teacher interview. This

1. H. E. Jones, "An Adolescent Growth Study". Journal of Consulting Psychology, 3(5): 157-159 (1939).

2. Breckenridge and Vincent, op. cit., p. 41.

held aside in the development of the "whole personality," and no one skill or mastery is distinct in itself. It is a process of interaction, and as Jones¹ concludes, "from the very fact that the individual is an organism and not a piece and combination of elements, it follows that any structure and function may have a significant relationship to any other structure or function and to the total organism."

It is impossible to say what any one factor definitely contributes to the development of gross motor ability, but perhaps through an investigation of several areas of a child's experience, when seen in analysis with others, possible influences may be discovered. It was with this thought in mind that the following factors were selected for investigation of the educational experience of each selected case.

As Brockmeyer and Vincent² reported on Todd's study, "the child whose physical development is retarded lacks that plastic alertness on which the experience of his years should be registered." Certainly, physical limitations retard achievement, and for that reason, the recording of any physical defects or observations on the child's school health record was included in the teacher interview. This

1. H. E. Jones, "An Adolescent Growth Study," Journal of Genetic Psychology, 3(2): 127-132 (1932).

2. Brockmeyer and Vincent, op. cit., p. 41.

also allowed for an accumulation of height and weight reports for use in plotting the iso-developmental level for each child, using the Wetzel grid.¹

Strang,² in describing activities observed one morning in a kindergarten, gives ample evidence of an enlarged opportunity for experience for children. Although no two kindergartens are conducted in the same efficacy, the importance of such an experience seemed to merit including its notation in this survey.

School achievement and general intelligence have been studied in correlation with many factors. Cunningham³ reported that possible relation between scores on motor tests and intelligence test scores are indicated to a degree. The intelligence quotient, notations of promotions, retardations, and aptitude in reading, writing, drawing and learning ability were, therefore, listed in the teacher interview evaluation instrument.

Attendance, according to Strang,⁴ has been emphasized out of all proportion to its significance in the child's de-

1. N. C. Wetzel, "Physical Fitness in Terms of Physique, Development and Basal Metabolism, with a Guide to Individual Progress from Infancy to Maturity," Journal of the American Medical Association (1941), Vol. 116, No. 12, p. 1187.

2. R. Strang, An Introduction to Child Study. MacMillan Company, New York, 1938, p. 300.

3. B. Cunningham, "An Experiment in Measuring Gross Motor Development of Infants and Young Children," Journal of Educational Psychology (1927), 18: 458-464.

4. Strang, op. cit., p. 351.

also allowed for an accommodation of height and weight re-
sults for use in plotting the two-dimensional level for
each child, using the Weibel Grid.¹

Strong,² in describing activities observed one morning
in a kindergarten, gives ample evidence of an ordered or-
ganization for experience for children. Although no two
kindergartens are conducted in the same efficacy, the in-
fluence of such an experience seems to merit inclusion
in the notation in this survey.

School achievement and general intelligence have been
studied in correlation with many factors. Cunningham³ re-
ported that possible relation between scores on motor tests
and intelligence test scores are indicated to a degree. The
intelligence quotient, notations of promotions, retardations,
and attitude in reading, writing, drawing and learning effi-
cacy were, therefore, listed in the teacher interview evan-
gelical instrument.

Attendance, according to Strong,⁴ has been emphasized
out of all proportion to its significance in the child's de-
velopment and health. "Physical Fitness in Terms of Physical De-
velopment and Health Research, with a Guide to Individual
Progress from Infancy to Adulthood," Journal of the American
Medical Association (1931), Vol. 116, No. 12, p. 1187.

E. A. Strong, An Introduction to Child Study, Macmillan
Company, New York, 1927, p. 308.
J. B. Cunningham, "An Experiment in Measuring Gross Motor
Development of Infants and Young Children," Journal of Ex-
perimental Psychology (1927), 14: 448-454.

4. Strong, op. cit., p. 351.

velopment; however, as cue to problems of adjustment, it has guidance value. Total absences for the first two grades were, therefore, included in this investigation, with the feeling that limited time in school might possibly indicate limited experience and therein be a factor associated with motor development.

The importance of muscular activity, according to Breckenridge¹, is that it improves general health and increases endurance, strength and accuracy, all of which are related to motor development. The activeness or passiveness of a child in school can indicate to a degree the extent to which this activity is engaged in. The ceaseless energy that a child expresses, or his listless sedentary action, can, in effect, enhance or decrease development of motor abilities. For this evidence, the activeness, passiveness and energy level of each child was, therefore, investigated.

Breckenridge and Vincent² likewise opined that strains or conflict produced in the life of a child can interfere with his physical functions as well as with his ability to think clearly, and hence, learn. Expression of tension was, therefore, an item to be uncovered in the teacher interview.

"Accelerated performers tended to be represented by the better adjusted child." This was the conclusion of Jones³ in a study of the development of motor skill in young

1. Breckenridge and Vincent, op. cit., p. 143.

2. Ibid, p. 60.

3. T. D. Jones, op. cit., p. 56.

children. It would seem, then, that the wholesome personality factors, such as resourcefulness, inquisitiveness, and the like, would be associated with children of superior motor performance. From Bailey's¹ outline for child study, personality traits were listed for the teacher to check in evaluation of the selected child's behavior.

Jersild² maintains that development in the child's social behavior may profoundly influence aspects of his motor development. The example set by others, and all that is involved in the child's social setting, influence to an important degree his learning of motor skills. It was therefore decided to ascertain the reaction of others to the child studied, whether popular or rejected, if a leader or follower, and to note the number, type and response to playmates.

Feeling that, with an understanding of the purpose of the study, the teacher might have additional pertinent information, provision for added remarks was included, anticipating an opportunity to utilize these in preparing the individual case report.

Development of the Parent Interview Instrument. The most difficult problem in developing the parent interview instrument was in limiting the investigation to those fac-

1. E. Bailey, A. Laton and E. Bishop, Principles of Child Study. McGraw-Hill Book Co., New York, 1933, p. 76.

2. Jersild, op. cit., p. 56.

tors which, quite possibly, would be related to development of motor ability. In this respect, once again, previous research and current literature served to guide and direct the selection. In outlining the instrument, it was so arranged that each topic was to serve as a point of elaboration, as well as presenting specific information.

Strang¹ indicated in her writings that children in different cultures grow up to be different, and this can often be indicated in their personality. In ascertaining the birth of parents, and the generations in the United States, the intention was to note any possible influence upon the child's behavior due to the parents being foreign born.

Parental influence upon a child's growth and development can hardly be overlooked. Several studies have attempted to specify this influence. Goodenough² noticed a distinct relationship between intelligence test scores of children, and parents' education, suggesting that possibly the greater the education of the parent, the higher the performance of the child upon an intelligence test might tend to be. Similarly, if parents are better informed, quite possibly the child will be, and various functions may be accelerated thereby. The extent of parent education was, therefore, included in this study.

1. Strang, op. cit., p. 82.

2. F. Goodenough, "Relation of Intelligence of Pre-School Children to Education of Parents." School and Society, (1927), 26:54-56.

Occupations of mother and father were included to ascertain the amount of time the parents were able to spend with the child. The importance of this factor, in addition to discovering the athletic participation and inclination of the parents in relation to past and present experience, is seen in the report on Nestricks' study by Jersild¹. It was stated that the importance of opportunity for motor learning is emphasized in that motor activity undertaken by adults is influenced by what they learned, or failed to learn, as a child.

In a like consideration, any injuries or illnesses of either parent which deprived the child of active relationship with them, were also included.

Changes in residence, wherein a child moves from a restricted area to one in which freedom is found for play activity, as well as increased social contact, are mentioned by Hurlock², in emphasizing the importance of environment upon a child's development. The extent to which the child is able to adjust to his present environment with respect to the number of years spent at the present abode was also considered in investigating the various residences of the child.

1. Jersild, op. cit., p. 118.

2. E. Hurlock, Modern Ways with Children. Whittlesey House, New York, 1943, p. 295.

Difficulties associated with pregnancy or birth of the child were listed, for, as Strang¹ mentioned, a child's physical make-up may be affected by mechanical injury at birth, and nutritional disturbances of the mother caused by diet or serious illness. The mother's age was included to note if there was any relationship between older and younger mothers of superior and inferior children.

The effects of feeding response, eating and sleeping habits, illnesses and injuries, in addition to nervous conditions, hardly need to be justified for their inclusion. Variot reported, as quoted by Murchison², that breast-fed infants walked a month earlier than those bottle-fed. Smith³ noted the influence of illness during the first two years in infant development, those suffering illness being about 14% retarded in developmental rate. In all studies and discussions of the growth and development of children, the importance of health, nutrition, activity, rest, and reduction of emotional disturbances, is well established.

Hurlock⁴ opines that, from older brothers and sisters, or from groups of older playmates, every child learns certain types of play. As a result of this relationship, ac-

1. Strang, op. cit., p. 34.

2. C. Murchison, Handbook of Child Psychology. Clark University, Worcester, 1933, p. 252.

3. S. Smith, "Influence of Illness during First Two Years on Infant Development." Journal of Genetic Psychology, (1931), 39: 284-287.

4. Hurlock, op. cit., p. 185.

celerated motor development may possibly be resultant. Playmates, as well as siblings, their ages, sex and number, were therefore listed for investigation.

Kawin¹ suggests that a child's interests and play activities parallel his general mental and motor development. Activity constitutes one of the great hungers of life, and has deep biological significance in that development is, to a great extent, the result of activity. In the light of the foregoing, it seemed necessary to discover just what activity the child under study participated in after school, Saturdays, Sundays, and rainy days, noting especially the activeness or passiveness of this play.

How quickly and how well a child learns will depend upon his start, according to Hurlock². It is therefore essential that he should have direction at the beginning of his learning. Special instruction then can more adequately assist a child in his motor development. The extent and relative areas of instruction for each child being studied were therefore included. In that opportunity at summer and day camps, as well as summer experiences at the beach or resort, as over remaining at home, will provide much greater opportunity for instruction and greater activity, the extent of each child's summer activity was investigated.

1. Kawin, op. cit., p. 56.

2. Hurlock, op. cit., p. 81.

Breckenridge¹ commented that the actual physical space in the child's home and around it will determine whether he has play and exercise, or tension and unrest. The number and kind of people in this space will determine much of the child's behavior. With opportunity and variation in physical activity, a child will, under normal situations, develop adequate motor control. In listing home and playground provisions and facilities, in addition to the extent of their use, the relationship to opportunity and development of motor skills may possibly be indicated.

Damann² reported the influence of interest in acquisition of motor skills, and Jones³ made reference to the definite influence on play activity that opportunity to use material created, and the significance of whether this use was in a manipulative or gross activity manner. In attempting to discover factors related to motor development, it seemed noteworthy, then, to include an investigation into the types of infant and childhood toys and play activities, as well as the enjoyment and participation in this respect.

Recognizing that parents would, quite naturally, have relevant information aside from the questions asked, a provision was made for additional remarks and notations.

1. Breckenridge and Vincent, op. cit., p. 152.

2. Damann, op. cit., p. 245.

3. T. D. Jones, op. cit., p. 80.

Interview Procedure. In each instance, in the teacher as well as the parent interview, personal contact was established and arrangements made for visitation. In all cases, the teacher interview was conducted at the school, generally running about fifteen to twenty minutes in length. Additional time was spent in recording the various material from school records.

It necessitated evening, as well as daytime, visits to see each of the twenty parents, and within a month and a half of beginning the parent interviews, the case studies were completed. The length of time for the parent interview ran usually around one hour to one and one-half hours, this being extended rather than lowered in the majority of instances.

The nature and purpose of the interview were explained to both the teacher and parent. Unless specifically asked, no reference was made to the relative performance of the child upon the motor test. It was felt that this procedure would encourage a frank and forthright answer. At the conclusion of the interview, in order to encourage additional comments, the teacher and parent were asked if they could supply additional information which might have a bearing upon the motor performance of the child.

The cooperativeness and sincere interest by both

teachers and parents were more than anticipated, and certainly encouraging.

EFFICIENCY BOND

THE UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR

U. S. CO.

CONTENTS

EFFICIENCY BOND

EFFICIENCY BOND

U. S. CO.

CONTENTS

CHAPTER III

ANALYSIS OF DATA

The purpose of this study was to reveal in twenty selected case studies factors which may suggest the reasons for the individual's superior or inferior performance upon a particular gross motor skill test. Through this investigation, it was hoped to reveal the relationship of hereditary and environmental influences upon the development of gross motor ability.

To present the data for interpretation in the most advantageous manner possible, a series of tables were designed. According to performance upon the motor skill test, the cases are classified into either the superior or inferior group, five boys and five girls within each group, designated by F for girls and M for boys as each case is reported. The several factors investigated are listed upon a series of tables, and wherein each case falls into this category, it is so represented. In the Appendix, the reader will also find individual case summaries where an explanation, description and further elaboration are given for the factors represented in the tables, for the respective cases.

In presenting each table, an explanation of the various factors thereon, and an interpretation of this data, are given.

CHAPTER III ANALYSIS OF DATA

The purpose of this study was to reveal in twenty selected cases studies factors which may suggest the reasons for the individual's superior or inferior performance upon a particular motor skill test. Through this investigation, it was hoped to reveal the relationship of heredity and environmental influences upon the development of gross motor ability.

To present the data for interpretation in the most advantageous manner possible, a series of tables were designed. According to performance upon the motor skill test, the cases are classified into either the superior or inferior group, five boys and five girls within each group, designated by F for girls and M for boys in each case as reported. The several factors investigated are listed upon a series of tables, and wherein each case falls into this category, it is so represented. In the Appendix, the reader will also find individual case summaries where an explanation, description and further elaboration are given for the factors represented in the tables, for the respective cases. In presenting each table, an explanation of the various factors involved, and an interpretation of this data, are given.

Table I discloses the various factors as taken from the school records. The age at starting school, expressed in years and months, is given for each case, whether or not they attended nursery school or kindergarten, and the total number of absences for the first two grades of school. Retardations are listed according to the grade repeated, and a notation of any special classes attended. The intelligence quotient for each case is taken from the recording of performance upon the Pinter-Durost Elementary A Test. The differences in chronological age and mental age as reported for each case are due to the varying ages at which each child was tested, and the different types of tests that were employed. Remarks on health records are represented or not, depending upon whether the child has had a note sent home for needed attention of any physical condition or defect.

It is seen from this table that nine cases in the superior group had started school later than five years and four months of age, as compared to but five cases in the inferior group. Seven of the inferior cases had attended nursery school or kindergarten, compared to five of the superior cases. In total absences from school in the first two grades, only one case in the superior group had more than fifty absences, as compared to four cases in the inferior group.

Three of the inferior group had attended special

Table I discloses the various factors as taken from the school records. The age at starting school, expressed in years and months, is given for each case, whether or not they attended nursery school or kindergarten, and the total number of absences for the first two grades of school. Re- tardations are listed according to the grade repeated, and a notation of any special classes attended. The intelligence quotient for each case is taken from the recording of per- formance upon the Pintner-Durost Elementary A Test. The dif- ferences in chronological age and mental age as reported for each case are due to the varying ages at which each child was tested, and the different types of tests that were em- ployed. Remarks on health records are represented or not, depending upon whether the child has had a note sent home for needed attention of any physical condition or defect.

It is seen from this table that nine cases in the superior group had started school later than five years and four months of age, as compared to but five cases in the in- ferior group. Seven of the inferior cases had attended nursery school or kindergarten, compared to five of the superior cases. In total absences from school in the first two grades, only one case in the superior group had more than fifty absences, as compared to four cases in the in- ferior group.

Three of the inferior group had attended special

TABLE I

A Synopsis of the School Records of the Twenty Selected Cases

	Age Starting School	Kindergarten, Nursery School Attendance	Total Absences of First Two Years (Days)	Special Classes	Intelligence Quotient	Chronological Age	Mental Age	Retardations-Grade	Remarks on Health Records
Superior Group									
Case F-1	5-6	K	41		113	8-7	9-11		
F-2	6-2		35		90	6-2	5-7	1st	*
F-3	6-6		45		95	8-8	8-1		
F-4	6-5		11		114	7-1	7-4		
F-5	6-4		23		114	7-0	7-5		*
M-1	5-5	K	42		91	8-8	7-11	3rd	*
M-2	5-6	K	31		111	8-8	9-9		
M-3	5-5	K	51		118	8-7	10-6		
M-4	5-4	K	43		114	8-6	9-4		*
M-5	5-10		27		110	5-10	6-6		*
Inferior Group									
Case F-6	5-2	K	17		119	8-1	9-11		*
F-7	5-1	K	78		104	9-3	9-8	1st	*
F-8	5-8	K	73		99	8-3	8-2		
F-9	5-8		49		124	7-9	10-1		
F-10	6-6		124		104	8-8	9-1		
M-6	6-0		25	Rdg.	101	7-4	7-5		*
M-7	5-8	N	29	Rdg.	100	6-5	6-3		*
M-8	5-1	K	0	Rdg.	100	8-3	8-8		*
M-9	5-4	K	52		104	7-11	8-1		*
M-10	4-10	N	40		115	8-2	9-5		

5-6 = Year and Month.

K = Kindergarten.

N = Nursery School.

Rdg. = Reading.

* = Associated with particular case.

TABLE I

A Synopsis of the School Records of the Twenty Selected Cases

Case	Superior Group	Inferior Group	Sex	Age	School	Location	Occupation	Marital Status	Children	Education	Health	Mental	Physical	Social	Economic	Cultural	Religious	Political	Other
1-1	1-1	1-1	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-2	1-2	1-2	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-3	1-3	1-3	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-4	1-4	1-4	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-5	1-5	1-5	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-6	1-6	1-6	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-7	1-7	1-7	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-8	1-8	1-8	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-9	1-9	1-9	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-10	1-10	1-10	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-11	1-11	1-11	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-12	1-12	1-12	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-13	1-13	1-13	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-14	1-14	1-14	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-15	1-15	1-15	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-16	1-16	1-16	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-17	1-17	1-17	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-18	1-18	1-18	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-19	1-19	1-19	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-20	1-20	1-20	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-21	1-21	1-21	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-22	1-22	1-22	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-23	1-23	1-23	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-24	1-24	1-24	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-25	1-25	1-25	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-26	1-26	1-26	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-27	1-27	1-27	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-28	1-28	1-28	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-29	1-29	1-29	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-30	1-30	1-30	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-31	1-31	1-31	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-32	1-32	1-32	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-33	1-33	1-33	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-34	1-34	1-34	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-35	1-35	1-35	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-36	1-36	1-36	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-37	1-37	1-37	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-38	1-38	1-38	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-39	1-39	1-39	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-40	1-40	1-40	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-41	1-41	1-41	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-42	1-42	1-42	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-43	1-43	1-43	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-44	1-44	1-44	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-45	1-45	1-45	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-46	1-46	1-46	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-47	1-47	1-47	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-48	1-48	1-48	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-49	1-49	1-49	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1-50	1-50	1-50	M	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17

1-5 = Year and Month.

K = Kindergarten.

N = Nursery School.

Hdg. = Reading.

* = Associated with particular case.

classes in reading, while none of the superior group had had this experience. Seven cases in the superior group had intelligence quotients of 110 or over, as compared to three cases in the inferior group.

In relation to health records, five cases in the superior group had remarks listed, while six cases in the inferior group were so recorded.

Table II portrays the various classroom work abilities of the cases, as well as notations of any particular mannerisms. The degree of ability in reading, writing and learning is expressed by the quality of excellent, good, fair or poor, and this was a subjective evaluation of the teacher. Drawing ability was recorded depending upon whether the child consistently had his work displayed upon the board. Expression of nervous tension was recorded if the teacher remarked on the child's biting his nails, stammering or stuttering, or fidgeting in any marked manner. Discipline problem was associated with a child if he had been consistently reported by his teacher, or disrupted class procedure to any degree of concern. Left-handedness or any marked difficulty in writing was also an evaluation of the respective teachers.

Of the superior group, seven of the cases had either excellent or good reading and writing ability, compared to but five cases of the inferior group receiving this classi-

classroom in reading, while none of the superior group had had this experience. Seven cases in the superior group had intelligence quotients of 110 or over, as compared to three cases in the inferior group.

In relation to health records, five cases in the superior group had remarks listed, while six cases in the inferior group were so recorded.

Table II portrays the various classroom work activities of the cases, as well as notations of any particular nervousness. The degree of ability in reading, writing and learning is expressed by the quality of excellent, good, fair or poor, and this was a subjective evaluation of the teacher. Drawing ability was recorded depending upon whether the child consistently had his work displayed upon the board. Expression of nervous tension was recorded if the teacher remarked on the child's biting his nails, stammering or stuttering, or flinching in any marked manner. Discipline problem was associated with a child if he had been consistently reported by his teacher, or disrupted class procedure to any degree of concern. Left-handedness or any marked difficulty in writing was also an evaluation of the respective teachers.

Of the superior group, seven of the cases had either excellent or good reading and writing ability, compared to but five cases of the inferior group receiving this class-

TABLE II

An Evaluation of the Classroom Ability and Mannerisms of the Twenty Selected Cases, as Disclosed in the Teacher Interview

	Reading Ability	Writing Ability	Drawing Ability	Learning and Com- prehending Ability	Nervous Tension	Discipline Prob- lem	Left-handedness
Superior Group							
Case F-1	E	P		E			*
F-2	P	P		P		*	
F-3	G	G	*	F			
F-4	G	G	*	G			
F-5	E	G	*	E	*		
M-1	P	P		P			
M-2	E	E		E			
M-3	G	E		E	*		
M-4	G	G		E	*		
M-5	F	E		G		*	*
Inferior Group							
Case F-6	G	G		E			
F-7	G	F		G	*		
F-8	P	P		P	*		*
F-9	G	E		P	*		
F-10	G	G	*	E			
M-6	F	F		P	*		
M-7	F	P		P			*
M-8	F	F		P	*		
M-9	F	F		P			
M-10	G	P		P	*	*	

E = Excellent

G = Good

F = Fair

P = Poor

* = Associated with particular case.

TABLE II

An Evaluation of the Classroom Ability and Mannerisms of the Twenty Selected Cases, as Disclosed in the Teacher Interview

Superior Group	Case	F-1	F-2	F-3	F-4	F-5	F-6	F-7	F-8	F-9	F-10	F-11	F-12	F-13	F-14	F-15	F-16	F-17	F-18	F-19	F-20	F-21	F-22	F-23	F-24	F-25	F-26	F-27	F-28	F-29	F-30	F-31	F-32	F-33	F-34	F-35	F-36	F-37	F-38	F-39	F-40	F-41	F-42	F-43	F-44	F-45	F-46	F-47	F-48	F-49	F-50	F-51	F-52	F-53	F-54	F-55	F-56	F-57	F-58	F-59	F-60	F-61	F-62	F-63	F-64	F-65	F-66	F-67	F-68	F-69	F-70	F-71	F-72	F-73	F-74	F-75	F-76	F-77	F-78	F-79	F-80	F-81	F-82	F-83	F-84	F-85	F-86	F-87	F-88	F-89	F-90	F-91	F-92	F-93	F-94	F-95	F-96	F-97	F-98	F-99	F-100	F-101	F-102	F-103	F-104	F-105	F-106	F-107	F-108	F-109	F-110	F-111	F-112	F-113	F-114	F-115	F-116	F-117	F-118	F-119	F-120	F-121	F-122	F-123	F-124	F-125	F-126	F-127	F-128	F-129	F-130	F-131	F-132	F-133	F-134	F-135	F-136	F-137	F-138	F-139	F-140	F-141	F-142	F-143	F-144	F-145	F-146	F-147	F-148	F-149	F-150	F-151	F-152	F-153	F-154	F-155	F-156	F-157	F-158	F-159	F-160	F-161	F-162	F-163	F-164	F-165	F-166	F-167	F-168	F-169	F-170	F-171	F-172	F-173	F-174	F-175	F-176	F-177	F-178	F-179	F-180	F-181	F-182	F-183	F-184	F-185	F-186	F-187	F-188	F-189	F-190	F-191	F-192	F-193	F-194	F-195	F-196	F-197	F-198	F-199	F-200	F-201	F-202	F-203	F-204	F-205	F-206	F-207	F-208	F-209	F-210	F-211	F-212	F-213	F-214	F-215	F-216	F-217	F-218	F-219	F-220	F-221	F-222	F-223	F-224	F-225	F-226	F-227	F-228	F-229	F-230	F-231	F-232	F-233	F-234	F-235	F-236	F-237	F-238	F-239	F-240	F-241	F-242	F-243	F-244	F-245	F-246	F-247	F-248	F-249	F-250	F-251	F-252	F-253	F-254	F-255	F-256	F-257	F-258	F-259	F-260	F-261	F-262	F-263	F-264	F-265	F-266	F-267	F-268	F-269	F-270	F-271	F-272	F-273	F-274	F-275	F-276	F-277	F-278	F-279	F-280	F-281	F-282	F-283	F-284	F-285	F-286	F-287	F-288	F-289	F-290	F-291	F-292	F-293	F-294	F-295	F-296	F-297	F-298	F-299	F-300	F-301	F-302	F-303	F-304	F-305	F-306	F-307	F-308	F-309	F-310	F-311	F-312	F-313	F-314	F-315	F-316	F-317	F-318	F-319	F-320	F-321	F-322	F-323	F-324	F-325	F-326	F-327	F-328	F-329	F-330	F-331	F-332	F-333	F-334	F-335	F-336	F-337	F-338	F-339	F-340	F-341	F-342	F-343	F-344	F-345	F-346	F-347	F-348	F-349	F-350	F-351	F-352	F-353	F-354	F-355	F-356	F-357	F-358	F-359	F-360	F-361	F-362	F-363	F-364	F-365	F-366	F-367	F-368	F-369	F-370	F-371	F-372	F-373	F-374	F-375	F-376	F-377	F-378	F-379	F-380	F-381	F-382	F-383	F-384	F-385	F-386	F-387	F-388	F-389	F-390	F-391	F-392	F-393	F-394	F-395	F-396	F-397	F-398	F-399	F-400	F-401	F-402	F-403	F-404	F-405	F-406	F-407	F-408	F-409	F-410	F-411	F-412	F-413	F-414	F-415	F-416	F-417	F-418	F-419	F-420	F-421	F-422	F-423	F-424	F-425	F-426	F-427	F-428	F-429	F-430	F-431	F-432	F-433	F-434	F-435	F-436	F-437	F-438	F-439	F-440	F-441	F-442	F-443	F-444	F-445	F-446	F-447	F-448	F-449	F-450	F-451	F-452	F-453	F-454	F-455	F-456	F-457	F-458	F-459	F-460	F-461	F-462	F-463	F-464	F-465	F-466	F-467	F-468	F-469	F-470	F-471	F-472	F-473	F-474	F-475	F-476	F-477	F-478	F-479	F-480	F-481	F-482	F-483	F-484	F-485	F-486	F-487	F-488	F-489	F-490	F-491	F-492	F-493	F-494	F-495	F-496	F-497	F-498	F-499	F-500	F-501	F-502	F-503	F-504	F-505	F-506	F-507	F-508	F-509	F-510	F-511	F-512	F-513	F-514	F-515	F-516	F-517	F-518	F-519	F-520	F-521	F-522	F-523	F-524	F-525	F-526	F-527	F-528	F-529	F-530	F-531	F-532	F-533	F-534	F-535	F-536	F-537	F-538	F-539	F-540	F-541	F-542	F-543	F-544	F-545	F-546	F-547	F-548	F-549	F-550	F-551	F-552	F-553	F-554	F-555	F-556	F-557	F-558	F-559	F-560	F-561	F-562	F-563	F-564	F-565	F-566	F-567	F-568	F-569	F-570	F-571	F-572	F-573	F-574	F-575	F-576	F-577	F-578	F-579	F-580	F-581	F-582	F-583	F-584	F-585	F-586	F-587	F-588	F-589	F-590	F-591	F-592	F-593	F-594	F-595	F-596	F-597	F-598	F-599	F-600	F-601	F-602	F-603	F-604	F-605	F-606	F-607	F-608	F-609	F-610	F-611	F-612	F-613	F-614	F-615	F-616	F-617	F-618	F-619	F-620	F-621	F-622	F-623	F-624	F-625	F-626	F-627	F-628	F-629	F-630	F-631	F-632	F-633	F-634	F-635	F-636	F-637	F-638	F-639	F-640	F-641	F-642	F-643	F-644	F-645	F-646	F-647	F-648	F-649	F-650	F-651	F-652	F-653	F-654	F-655	F-656	F-657	F-658	F-659	F-660	F-661	F-662	F-663	F-664	F-665	F-666	F-667	F-668	F-669	F-670	F-671	F-672	F-673	F-674	F-675	F-676	F-677	F-678	F-679	F-680	F-681	F-682	F-683	F-684	F-685	F-686	F-687	F-688	F-689	F-690	F-691	F-692	F-693	F-694	F-695	F-696	F-697	F-698	F-699	F-700	F-701	F-702	F-703	F-704	F-705	F-706	F-707	F-708	F-709	F-710	F-711	F-712	F-713	F-714	F-715	F-716	F-717	F-718	F-719	F-720	F-721	F-722	F-723	F-724	F-725	F-726	F-727	F-728	F-729	F-730	F-731	F-732	F-733	F-734	F-735	F-736	F-737	F-738	F-739	F-740	F-741	F-742	F-743	F-744	F-745	F-746	F-747	F-748	F-749	F-750	F-751	F-752	F-753	F-754	F-755	F-756	F-757	F-758	F-759	F-760	F-761	F-762	F-763	F-764	F-765	F-766	F-767	F-768	F-769	F-770	F-771	F-772	F-773	F-774	F-775	F-776	F-777	F-778	F-779	F-780	F-781	F-782	F-783	F-784	F-785	F-786	F-787	F-788	F-789	F-790	F-791	F-792	F-793	F-794	F-795	F-796	F-797	F-798	F-799	F-800	F-801	F-802	F-803	F-804	F-805	F-806	F-807	F-808	F-809	F-810	F-811	F-812	F-813	F-814	F-815	F-816	F-817	F-818	F-819	F-820	F-821	F-822	F-823	F-824	F-825	F-826	F-827	F-828	F-829	F-830	F-831	F-832	F-833	F-834	F-835	F-836	F-837	F-838	F-839	F-840	F-841	F-842	F-843	F-844	F-845	F-846	F-847	F-848	F-849	F-850	F-851	F-852	F-853	F-854	F-855	F-856	F-857	F-858	F-859	F-860	F-861	F-862	F-863	F-864	F-865	F-866	F-867	F-868	F-869	F-870	F-871	F-872	F-873	F-874	F-875	F-876	F-877	F-878	F-879	F-880	F-881	F-882	F-883	F-884	F-885	F-886	F-887	F-888	F-889	F-890	F-891	F-892	F-893	F-894	F-895	F-896	F-897	F-898	F-899	F-900	F-901	F-902	F-903	F-904	F-905	F-906	F-907	F-908	F-909	F-910	F-911	F-912	F-913	F-914	F-915	F-916	F-917	F-918	F-919	F-920	F-921	F-922	F-923	F-924	F-925	F-926	F-927	F-928	F-929	F-930	F-931	F-932	F-933	F-934	F-935	F-936	F-937	F-938	F-939	F-940	F-941	F-942	F-943	F-944	F-945	F-946	F-947	F-948	F-949	F-950	F-951	F-952	F-953	F-954	F-955	F-956	F-957	F-958	F-959	F-960	F-961	F-962	F-963	F-964	F-965	F-966	F-967	F-968	F-969	F-970	F-971	F-972	F-973	F-974	F-975	F-976	F-977	F-978	F-979	F-980	F-981	F-982	F-983	F-984	F-985	F-986	F-987	F-988	F-989	F-990	F-991	F-992	F-993	F-994	F-995	F-996	F-997	F-998	F-999	F-1000	F-1001	F-1002	F-1003	F-1004	F-1005	F-1006	F-1007	F-1008	F-1009	F-1010	F-1011	F-1012	F-1013	F-1014	F-1015	F-1016	F-1017	F-1018	F-1019	F-1020	F-1021	F-1022	F-1023	F-1024	F-1025	F-1026	F-1027	F-1028	F-1029	F-1030	F-1031	F-1032	F-1033	F-1034	F-1035	F-1036	F-1037	F-1038	F-1039	F-1040	F-1041	F-1042	F-1043	F-1044	F-1045	F-1046	F-1047	F-1048	F-1049	F-1050	F-1051	F-1052	F-1053	F-1054	F-1055	F-1056	F-1057	F-1058	F-1059	F-1060	F-1061	F-1062	F-1063	F-1064	F-1065	F-1066	F-1067	F-1068	F-1069	F-1070	F-1071	F-1072	F-1073	F-1074	F-1075	F-1076	F-1077	F-1078	F-1079	F-1080	F-1081	F-1082	F-1083	F-1084	F-1085	F-1086	F-1087	F-1088	F-1089	F-1090	F-1091	F-1092	F-1093	F-1094	F-1095	F-1096	F-1097	F-1098	F-1099	F-1100	F-1101	F-1102	F-1103	F-1104	F-1105	F-1106	F-1107	F-1108	F-1109	F-1110	F-1111	F-1112	F-1113	F-1114	F-1115	F-1116	F-1117	F-1118	F-1119	F-1120	F-1121	F-1122	F-1123	F-1124	F-1125	F-1126	F-1127	F-1128	F-1129	F-1130	F-1131	F-1132	F-1133	F-1134	F-1135	F-1136	F-1137	F-1138	F-1139	F-1140	F-1141	F-1142	F-1143	F-1144	F-1145	F-1146	F-1147	F-1148	F-1149	F-1150	F-1151	F-1152	F-1153	F-1154	F-1155	F-1156	F-1157	F-1158	F-1159	F-1160	F-1161	F-1162	F-1163	F-1164	F-1165	F-1166	F-1167	F-1168	F-1169	F-1170	F-1171	F-1172	F-1173	F-1174	F-1175	F-1176	F-1177	F-1178	F-1179	F-1180	F-1181	F-1182	F-1183	F-1184	F-1185	F-1186	F-1187	F-1188	F-1189	F-1190	F-1191	F-1192	F-1193	F-1194	F-1195	F-1196	F-1197	F-1198	F-1199	F-1200	F-1201	F-1202	F-1203	F-1204	F-1205	F-1206	F-1207	F-1208	F-1209	F-1210	F-1211	F-1212	F-1213	F-1214	F-1215	F-1216	F-1217	F-1218	F-1219	F-1220	F-1221	F-1222	F-1223	F-1224	F-1225	F-1226	F-1227	F-1228	F-1229	F-1230	F-1231	F-1232	F-1233	F-1234	F-1235	F-1236	F-1237	F-1238	F-1239	F-1240	F-1241	F-1242	F-1243	F-1244	F-1245	F-1246	F-1247	F-1248	F-1249	F-1250	F-1251	F-1252	F-1253	F-1254	F-1255	F-1256	F-1257	F-1258	F-1259	F-1260	F-1261	F-1262	F-1263	F-1264	F-1265	F-1266	F-1267	F-1268	F-1269	F-1270	F-1271	F-1272	F-1273	F-1274	F-1275	F-1276	F-1277	F-1278	F-1279	F-1280	F-1281	F-1282	F-1283	F-1284	F-1285	F-1286	F-1287	F-1288	F-1289	F-1290	F-1291	F-1292	F-1293	F-1294	F-1295	F-1296	F-1297	F-1298	F-1299	F-1300	F-1301	F-1302	F-1303	F-1304	F-1305	F-1306	F-1307	F-1308	F-1309	F-1310	F-1311	F-1312	F-1313	F-1314	F-1315	F-1316	F-1317	F-1318	F-1319	F-1320	F-1321	F-1322	F-1323	F-1324	F-1325	F-1326	F-1327	F-1328	F-1329	F-1330	F-1331	F-1332	F-1333	F-1334	F-1335	F-1336	F-1337	F-1338	F-1339	F-1340	F-1341	F-1342	F-1343	F-1344	F-1345	F-1346	F-1347	F-
----------------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	----

fication in reading, and only three cases in writing.

Three of the superior group had indications of above average drawing ability compared to but one case of the inferior group being so classified. Seven cases of the superior group were also described as being either excellent or good learners, as compared to three cases of the inferior group. Six cases of the inferior group had indications of nervous tension compared to three cases of the superior group being so described.

Table III analyzed the social behavior of the cases as evaluated by a subjective judgment of the respective teachers. Active or passive referred to a child's participation both in and out of the classroom. Although every child has periods of quiescence and exuberance, the teacher was asked to characterize the child as to his more frequent display of activity. If a child showed any marked instances of being attracted to the opposite sex, by playing with them or teasing them constantly, this was so noted. The other factors are self-explanatory in relation to the child's relationship with his playmates.

Eight cases of the superior group appeared more active in their behavior than passive, as compared to only four cases of the inferior group being so pictured. Five inferior cases were listed as being retiring, as compared to none of the superior cases being so reported. Nine superior

TABLE III

An Analysis of the Social Behavior of the Twenty Selected Cases as Revealed in the Teacher Interview

	Active or Passive	Retiring	Aggressive	Bold	Popular	Rejected	Leader	Follower	Older or Younger	Playmates	Opposite Sex At- traction
<hr/>											
Superior Group											
Case F-1	A				*		*				
F-2	A		*	*							
F-3	P				*		*				
F-4	A				*		*				
F-5	A				*		*				*
M-1	A				*		*		Y		
M-2	A				*		*		O		
M-3	A				*		*				
M-4	A				*			*			
M-5	P				*			*			*
Inferior Group											
Case F-6	A	*						*	O		
F-7	A		*					*			*
F-8	A		*	*				*	Y		
F-9	P		*		*		*				*
F-10	P				*			*			
M-6	P	*						*			
M-7	A	*				*		*			
M-8	P	*						*	Y		
M-9	P				*			*	Y		
M-10	P	*				*					

A = Active

P = Passive

* = Associated with particular case

O = Older

Y = Younger

cases were listed as being popular and none rejected, compared to but three popular cases in the inferior group and two cases listed as being rejected.

Seven of the cases in the superior group were described as being leaders in their social relations, whereas eight cases of the inferior group were listed as being followers. The inferior group was also shown to include three cases where younger playmates were the rule rather than the exception.

In compiling personality factors, shown on Table IV, the teacher was asked once again to select those factors which described the particular case being investigated. Anxiousness was thought of in terms of being excitable, whereas inquiring was in reference to asking the why's and wherefore's of explanations. Resourceful was in relation to a child doing work on his own, being ingenious in this respect. Independent was the quality wherein a child could work on his own, be left to his own problem. Imaginative was in the light of fanciful expression in drawing and verbal descriptions. Stubborn was listed if a child appeared resentful or inattentive to correction or suggestions on the part of the teacher. All of the factors were evaluated subjectively by each teacher.

Six of the superior cases were characterized as being calm and resourceful, compared to but two cases of the inferior group. Five cases of the inferior group were tense

TABLE IV

A Compilation of Personality Factors of the Twenty Selected Cases as Revealed in the Teacher Interview

	Calm	Tense	Shy	Nervous	Anxious	Inquiring	Resourceful	Imaginative	Independent	Attentive	Cooperative	Stubborn
Superior Group												
Case F-1		*				*	*		*	*		
F-2	*											*
F-3	*		*				*		*	*		
F-4	*						*	*	*	*		
F-5		*		*	*		*		*			*
M-1	*				*				*	*		
M-2	*				*	*	*	*	*	*		
M-3		*				*			*	*	*	
M-4				*	*	*	*		*	*	*	
M-5	*		*						*		*	
Inferior Group												
Case F-6			*				*	*	*	*		
F-7	*			*				*				*
F-8		*		*		*		*				*
F-9	*				*				*	*		
F-10		*	*	*	*				*	*		
M-6		*	*	*				*				
M-7		*		*	*	*				*		
M-8		*		*	*	*						*
M-9			*	*	*	*			*	*		
M-10				*	*	*	*	*	*			

* Indicates association with particular case.

and four cases were shy, compared to only three and two cases respectively of the superior group. Similarly, six cases of the inferior group were listed as being nervous, where only two cases of the superior group were so described. The inferior group also had five imaginative children in relation to only two such children in the superior group.

Eight of the superior cases demonstrated cooperativeness where but five cases of the inferior group displayed this quality. Those shown to be inquiring were attributed to five cases of the inferior group as compared to four cases of the superior group. Although both groups had four children demonstrating anxiousness, in the superior group seven of the cases were reported as being attentive and four cases independent, as compared to but three cases in the inferior group being attentive and only two cases being independent.

In general, the superior group appeared to be characterized by more desirable and wholesome personality, behavior and social qualities than the inferior group, as disclosed by the respective teacher's evaluation.

Beginning with Table V, the various factors investigated by the parent interview are presented. With Table V is described the parental background and number of siblings of each of the twenty cases. Education lists the extent of

schooling that each parent received and is recorded under M for Mother and F for Father. In recording occupation for mother and father, the case is so designated wherever the occupation involved the parent being away from the child for any extended period of time or reduced in any way the amount of time a parent would normally be able to spend with the child. (Example - a father being a traveling salesman, or working away from the home neighborhood and returning only on week-ends; a mother working daytime, including after-school time and/or evenings.)

Athletic participation was recorded if the parent played upon any organized or school team, and if the parent now continued playing golf, tennis, skating, swimming and the like.

Illness or injury of either parent similarly was listed if the extent of hospitalization or convalescence reduced in any way the amount of time or opportunity of activity of the parent with the child.

Home changes were indicated if, for the individual case, the family moved during the child's lifetime so that it reduced the play opportunity of the child or was of such a nature that it proved disrupting to the family relationships and activity. (Example - a family living in a trailer; a family moving from one part of the country to another, or from or into a tenement district.)

Difficulties during pregnancy or birth were reported if the mother experienced any undue distress during the pre-natal period, or if at the birth of the child any complications resulted.

Siblings are reported as to number, sex, and their being older or younger than the child investigated.

The data presented on Table V indicated that of the inferior group, six cases had parents one or both of whom had attended college. This compared to only three cases of the superior group. In the superior group, however, eighteen of the twenty parents had begun high school, whereas in the inferior group, only fifteen of the twenty parents had started high school.

Six of the superior cases had parents who were listed as having occupational interferences, whereas seven cases of the inferior group were so designated.

Nine of the ten superior cases had parents one or the other or both of whom showed athletic inclination, as compared to but three of the inferior cases being so reported.

In regard to illness and injury, the superior group listed four cases as to but two cases of the inferior group. This ratio was reversed in noting home changes, the inferior group numbering four instances, the superior group but two. This was also the same numbering in relation to the number of cases that disclosed difficulties in pregnancy or birth.

TABLE V

A Description of the Parental Background and Number of Siblings of the Twenty Selected Cases

		Foreign Born		Education		Occupation		Athletic Participation		Illness or Injury		Home Changes	Mother's Age at Child's Birth	Pregnancy or Birth Difficulties	Older Siblings		Younger Siblings	
		M	F	M	F	M	F	M	F	M	F				M	F	M	F
Superior Group																		
Case	F-1			C	C		*		*				29			1		1
	F-2			G	3H	*	*		*	*		*	27	*	2	2		
	F-3			H	H				*				26				1	1
	F-4			3H	H				*	*	*		28		1	1		
	F-5			C	H		*		*			*	35					
	M-1			C	H		*		*	*			25	*				
	M-2			2H	2H	*			*				23			1	3	
	M-3			1H	G				*				26		1	1		
	M-4			H	H								26					1
	M-5			H	3H	*	*		*	*	*		22		1	Tw		
Inferior Group																		
Case	F-6			C	C				*				24	*			1	
	F-7			3H	1H		*						35		1			
	F-8	*		G	G		*			*			31					
	F-9			C	G		*					*	26	*				
	F-10			H	C		*	*	*	*		*	21	*				1
	M-6			1H	3H	*	*		*				16					1
	M-7			C	C		*					*	36	*				
	M-8			C	H								22				1	1
	M-9	*	*	G	G		*						38		2	1		
	M-10			H	C							*	31			1	1	

* = Associated with particular case.

C = College.

H = Completed high school.

3H = Completed 3rd year of high school.

G = Grammar school.

Tw = Twins.

M and F refer to Mother and Father, except in the recording of the number of siblings, where they mean Male and Female.

the names of siblings, where they mean male and female.
 M and F refer to Mother and Father, except in the recording of
 Tw = Twins.
 G = Grammar school.
 SH = Completed 3rd year of high school.
 H = Completed high school.
 U = College.
 * = Associated with particular case.

Inferior Group
 Case 1-6
 1-7
 1-8
 1-9
 1-10
 1-11
 1-12
 1-13
 1-14
 1-15
 Superior Group
 Case 1-1
 1-2
 1-3
 1-4
 1-5
 1-6
 1-7
 1-8
 1-9
 1-10
 1-11
 1-12
 1-13
 1-14
 1-15

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	---

Mothers who were over thirty at the birth of the child investigated numbered only one in the superior group, whereas the inferior group recorded five mothers in this classification.

As to the number, sex and ages of the siblings of the selected cases - two cases were only children, in the superior group; three cases were such in the inferior group. Six of the superior cases had older brothers or sisters, whereas the inferior group had only three cases with older siblings. Seven cases of the superior group had two or more siblings, as compared to only three cases of the inferior group having this number of brothers or sisters.

Table VI indicated the physical development of the selected cases, as well as the physical response in various situations. Feeding response was noted only when the particular child proved to be a poor nurser, fussy or associated with any difficulty, such as colic or sickness at feeding. Eating habits were similarly reported if the child was markedly fussy, pickish or irregular in eating habits and behavior.

In listing the average number of hours each child slept each day, a notation was also included if any indication of restlessness or disrupted sleeping habits was characteristic of the child. If a child sucked either

Mothers who were over thirty at the birth of the child investigated numbered only one in the superior group, whereas the inferior group recorded five mothers in this classification.

As to the number, sex and ages of the siblings of the selected cases - two cases were only children, in the superior group; three cases were such in the inferior group. Six of the superior cases had older brothers or sisters, whereas the inferior group had only three cases with older siblings. Seven cases of the superior group had two or more siblings, as compared to only three cases of the inferior group having this number of brothers or sisters.

Table VI indicated the physical development of the selected cases, as well as the physical response in various situations. Feeding response was noted only when the particular child proved to be a poor nurse, fussy or associated with any difficulty, such as colic or sickness at feeding. Eating habits were similarly reported in the child was markedly fussy, picky or irregular in eating habits and behavior.

In listing the average number of hours each child slept each day, a notation was also included if any indication of restlessness or disturbed sleeping habits was characteristic of the child. If a child seemed either

finger or thumb, the age at termination of this activity was reported. Nervous habits, as was noted in the teacher evaluation, were listed wherever excessive fidgeting, nail biting, stuttering or unusual physical mannerisms were reported.

Utilizing age, height and weight, the classification associated with the iso-developmental level as plotted on the Wetzel grid, and the channel for each child, was shown. Also, whether the developmental level of the child was normal, advanced or retarded for his years, was expressed in years and months.

From Table VI it is seen that the age of weening for the breast-fed children in the superior group all exceeded one month, whereas in the inferior group three of the five breast-fed children were weened within the first month. Four cases of the inferior group had listed feeding response irregularities, seven cases eating irregularities, and five cases sleeping difficulties. This compared to but three feeding cases, no eating and only two sleeping irregularity cases in the superior group.

Eight cases of the inferior group had their afternoon naps continued beyond their third year, as compared to six cases of the superior group experiencing this practice. In the superior group, three children sucked their fingers or thumbs, and in the inferior group four of the children did so, one continuing the habit to the present time.

finger or thumb, the age at termination of this activity was reported. Nervous habits, as was noted in the teacher evaluation, were listed wherever excessive fidgeting, nail biting, stuttering or unusual physical mannerisms were reported.

Utilizing age, height and weight, the classification associated with the socio-developmental level as plotted on the Weibel grid, and the channel for each child, was shown. Also, whether the developmental level of the child was normal, advanced or retarded for his years, was expressed in years and months.

From Table VI it is seen that the age of weaning for the breast-fed children in the superior group all exceeded one month, whereas in the inferior group three of the five breast-fed children were weaned within the first month.

Four cases of the inferior group had listed feeding response irregularities, seven cases eating irregularities, and five cases sleeping difficulties. This compared to but three feeding cases, no eating and only two sleeping irregularities in the superior group.

Eight cases of the inferior group had their afternoon naps continued beyond their third year, as compared to six cases of the superior group experiencing this practice. In the superior group, three children sucked their fingers or thumbs, and in the inferior group four of the children did so, one continuing the habit to the present time.

TABLE VI

An Analysis of the Physical Development and Physical Response
of the Twenty Selected Cases

*Indicates if associated with particular case.

3m = 3rd month.

3y = 3rd year.

11 (number alone) = hours.

According to Classification by Wetzel Grid

Channel

Physical Status

A4

Obese

A3 A2

Stocky

A1 M B1

Good

B2

Fair

B3

Borderline

B4

Poor

A = Advanced physical development, expressed in years and months.

N = Normal.

R = Retarded, as expressed.

Six cases of the inferior group were characterized as displaying nervous habits, whereas only three cases of the superior group fell within this classification.

With respect to the time of walking, only two cases of the superior group were twelve months or older before walking; the other eight cases were walking before a year old. The inferior group numbered eight cases as not walking until twelve months or older, with only two cases walking before this time.

In the superior group, three cases were recorded as being either borderline or poor, in terms of physique, as channelized on the Wetzell grid. One of these was normal as far as developmental rate, whereas one was retarded by four months and the other advanced by six months.

In the inferior group, one child was recorded as being stocky and one as borderline. In this instance, the former was advanced by nearly four years, while the latter was retarded in his physical development by six months. Three others in this group, although falling within the good or fair channels of body build, were retarded by two years, six months and two months, respectively.

Table VII pictures the various infant and childhood illnesses of the selected cases, this being reported as to age in years and months at time of illness. Noted as well are any instances of complications of illness or injuries.

TABLE VII

A Description of Infant-Childhood Illnesses of the
Twenty Selected Cases

	Measles	Mumps	Chicken Pox	Whooping Cough	Pneumonia	Complicated Illnesses
Superior Group						
Case F-1	4-5				3 mo. }	*
F-2	6	8	8-5		11	
F-3	1	6	6			
F-4	5		5-6	3		
F-5	3					
M-1	7		4			*
M-2	6	4	8	4		
M-3	4-6		5	4		
M-4	4		6			
M-5	4		7			
Inferior Group						
Case F-6	7 mo.			3	3	*
F-7	4 mo.		6			*
F-8	7					*
F-9	4		6	4		*
F-10	7	6-6	7			
M-6	3	6		2-6		
M-7	7-6	4	4			
M-8	4	5	8			
M-9	6		5			*
M-10	5	6				

The numbers indicate years and months.

* Indicates if associated with particular case.

In the latter, a period of hospitalization for a month or more, or any instance of a serious injury, such as being struck by an automobile, or breaking a leg, is reason for this notation being listed.

In the inferior group, it is seen that four of the cases had instances where illnesses fell one after another at a particular age level. This was true in only two cases of the superior group. Five of the inferior group had instances of complicated illness or injury to only two cases in the superior group being so reported.

With Table VIII an evaluation of the type of homes from which the cases came, and the activity engaged in by members of the household, are seen. The heading "Housekeeps" reports whether or not the child has a routine for helping around the house. "Groundkeeps" is listed if the child actually assists more regularly than not in helping to garden, mow and rake the lawn, and shovel the snow. "Adults in Home" refers to older people, other than the immediate family, living in the same house. This would include relatives and boarders. The relationship of parent-child activity is recorded as to it being more regular and frequent or not. If the parent frequently engages in playing catch, going skating, swimming, or in any way actively associates with and instructs the child in activities, the particular case is thus represented.

In evaluation of the home and house, a subjective measure by the writer was introduced. Neat and disorderly are self-explanatory; where the home is referred to as being lived-in, the situation is such that the furnishings were nice, but over-caution as to use was not indicated. The fashionableness, modesty or poorness of a house was evaluated according to whether or not the house was of a particularly old vintage and style, whether run-down or cared-for, or strikingly new. Combined style houses included duplex and multi-family houses. In no case was there more than four families in one building.

The superior group, as reported on Table VIII, is seen to have seven out of the ten cases having housekeeping responsibilities, compared to only four such cases of the inferior group. Nine cases of the superior group likewise assist around the grounds of the house, as compared to four cases of the inferior group participating in this activity.

All of the superior group have parents who actively associate with them, and eight cases of this group are shown to enjoy this relationship to a marked degree. Nine cases of the inferior group have relationship with their parents, the one not reported coming from a parentage of foreign-born and old-country culture, therefore knew little of playing games and the like with his parents. Within these nine, however, four of the cases reported were shown

TABLE VIII

An Evaluation of the Homes and Home Activity
of the Twenty Selected Cases

		Housekeeps	Groundkeeps	Adults in Home	Parent-Child Activity	Home			House			Single or Combined
						Neat	Lived-In	Disorderly	Fashionable	Modest	Poor	
Superior Group												
Case	F-1	*			XX	*			*			C
	F-2		*		XX		*		*			S
	F-3		*		X			*	*			S
	F-4	*	*	*	XX	*			*			C
	F-5	*	*		XX	*			*			S
	M-1	*	*	*	XX	*			*			C
	M-2		*		XX			*		*		C
	M-3	*	*		XX		*		*			S
	M-4	*	*	*	X		*		*			C
	M-5	*	*		XX		*			*		S
Inferior Group												
Case	F-6				X		*		*			S
	F-7				R			*			*	C
	F-8	*			R	*			*			C
	F-9	*		*	X	*			*			C
	F-10	*	*		X			*	*			S
	M-6		*	*	X		*			*		S
	M-7	*	*	*	R	*			*			S
	M-8		*	*	R	*			*			C
	M-9			*		*			*			C
	M-10				X	*			*			S

* Indicates if associated with particular case.

x Indicates parents' participation.)Pertains to

xx Indicates parents especially active with child.)column 4.

R = Rarely.

S = Single style house.

C = Combined style house.

to receive this attention rarely, and none experienced this relationship and activity to a marked degree.

Seven houses of the inferior group were reported as fashionable compared to but four houses of the superior group, and six of the inferior homes were especially neat as compared to only four of the superior homes being so reported. Four homes of the superior cases appeared well lived-in, compared to only two homes of the inferior group. Within the superior group, as well as the inferior group, there were both five single-style houses and five combined-style houses.

Table IX describes the home, playground, and summer play provisions of the selected cases. Under home provisions, the adequacy or inadequacy of the yard is expressed, depending upon whether the child had access to using a play area, and if this was sufficiently large to play ball games, tag and general activity therein. Playroom is self-explanatory. Home-gym equipment is reported if there was more than just a swing (Ex., a rope ladder, high bar, shoot or slide, rings or see-saw). The proximity of the playground was ascertained as to whether it was within a block of two of the house, or if at a distance greater than a quarter of a mile. Frequency or infrequency refers to the child's playing at the playground at least twice a week or more. Under vacations is listed the summer experience of

TABLE IX

A Description of Home, Playground and Summer Play Provisions
of the Twenty Selected Cases

		<u>Home Provisions</u>				<u>Playgrounds</u>				<u>Vacations</u>				
		<u>Yard</u>		Play Room	Home Gym Equip.	Near	Far	Frequented	Not Fre- quented	<u>Camp</u>				
		Adequate	Inadeq.							Day	Season	Away	Trips	Home
Superior Group														
Case	F-1	*		*			*		*		*			
	F-2	*		*		*		*				*		
	F-3	*				*		*					*	
	F-4	*			*	*		*			*			
	F-5	*		*	*		*		*	*				
	M-1	*		*		*		*				*		
	M-2	*					*		*				*	
	M-3	*		*	*		*		*	*				
	M-4	*		*			*		*			*	*	
	M-5	*		*			*	*			*			
Inferior Group														
Case	F-6	*				*			*	*				
	F-7		*				*		*				*	
	F-8	*		*		*		*	*			*	*	
	F-9		*			*		*	*		*			
	F-10	*		*		*		*	*				*	
	M-6	*				*		*					*	
	M-7	*					*	*	*	*				
	M-8	*				*		*	*				*	
	M-9		*			*		*	*			*	*	
	M-10	*		*	*	*		*	*	*				

* Indicates if associated with particular case.

each child, whether he attends a summer day or season camp. If the family spends a month or more at the beach or at a summer resort, this is indicated, as compared to remaining exclusively at home. Trips are designated where a child spends more than two week-ends away from his home.

All of the superior group have adequate play yards surrounding their houses, as seen from Table IX, as compared to seven cases of the inferior group having this classification. Only three cases of the inferior group have a room or special space designated as a playroom, as compared to seven cases of the superior group having this provision. Of the five cases in the superior group frequenting the playground, only four of these live near the playground, compared to one case of the inferior group frequenting the playground, and yet eight cases of this group live near the playground.

Six cases of the inferior group remain at home during the summer months, whereas only three cases of the superior group fall within this category. Three cases of the inferior group attend a camp in one form or another, as compared to two cases of the superior group experiencing this opportunity.

The play interests, materials and play abilities of the twenty cases are illustrated by Table X. Activity interest is divided into gross, manipulative or both, and the

individual case is reported according to the general interest he displays in his play activity. Gross activity involves a more or less consistent interest in playing games, or using materials necessitating use of large muscles, as compared to manipulative interest, such as reading, drawing, playing with small toys, and limiting gross activity to mainly passive forms, as playing only catch, compared to actually playing the game of baseball.

The several play materials and abilities are recorded as to whether the child had such a toy or article or not, and if possessing this material, the extent of interest shown in the use of the material. Where an ability is listed, either the child is reported as being able to perform or not. (Ex., if a child played with a tricycle quite to the exclusion of a more passive activity, he would be shown by two asterisks; if having a tricycle but no enthusiastic interest, only one asterisk is shown. A child who has never had roller skates, or does not swim, is shown by an N.)

If a child was prohibited or restricted from climbing trees, this is indicated by a P. Those who climbed were reported by one x; if this was a frequent interest, then two x's were listed.

As indicated by Table X, the superior group included six children who were more active than passive in their activity interest, as compared to seven children of the

inferior group being more interested in manipulative activity. Five cases of the inferior group had either no blocks or pounding tables, as compared to only one superior child not having a pounding or peg table. A greater interest in pounding tables by the superior group is shown, in that eight cases out of the nine listed enjoyed this activity, whereas only three cases out of the eight inferior children listed enjoyed this play material.

Seven cases of the inferior group had no kitty car, whereas all of the superior group had this toy and seven cases of the group especially enjoyed its use. With the use of tricycles, all of the cases in each group had one, but only four cases in the inferior group played with it quite frequently, compared to seven cases of the superior group being so interested.

In the superior group, six children really enjoyed ice skating and skated well, all ten cases of the group having skates; only five children had ice skates in the inferior group, and none were overly active in their use. Nine of the children in both groups had roller skates, but only two cases in the inferior group spent a great deal of time skating, compared to six cases of the superior group enjoying this pastime.

Six of the cases in each group had scooters and used them occasionally. With the use of bicycles, only two cases in the inferior group had them, as compared to eight

TABLE X

A Synopsis of the Use of Play Materials, Interests and Ability of the Twenty Selected Cases

		Activity Interest														
		Gross	Manipulative	Both	Blocks	Crayons	Pounding Tables	Kitty Car	Tricycle	Ice Skates	Roller Skates	Scooter	Bicycle	Swims	Climbs Trees	Jumps Rope
Superior Group																
Case	F-1	*			*	*	**	**	**	**	**	*	N	X	X	XX
	F-2	*			*	**	**	N	**	**	**	*	*	X	XX	XX
	F-3	*			*	*	**	**	**	*	N	*	*	X	X	XX
	F-4			*	*	**	*	**	*	**	*	N	*	X	XX	XX
	F-5			*	*	**	**	**	**	*	*	N	*	N	X	XX
	M-1			*	*	*	**	**	**	**	**	N	*	N	X	X
	M-2	*			*	**	N	**	**	**	**	N	*	X	X	X
	M-3	*			**	*	**	*	*	*	**	*	*	N		X
	M-4			*	*	**	**	*	*	*	**	*	*	N	XX	X
	M-5	*			**	*	**	**	**	**	*	*	N	X	XX	X
Inferior Group																
Case	F-6		*		N	*	*	N	*	*	**	N	N	X		X
	F-7		*		*	**	**	N	*	N	*	*	N	N	P	X
	F-8		*		N	*	*	N	**	N	**	N	N	N	P	X
	F-9		*		*	*	N	**	**	N	*	*	N	N		XX
	F-10		*		**	**	*	*	*	*	*	*	*	N	P	X
	M-6	*			**	*	*	N	**	*	N	*	*	N	X	
	M-7		*		**	**	N	N	*	*	*	N	N	N	P	
	M-8			*	**	*	*	**	**	N	N	*	N	N		
	M-9		*		N	**	**	N	*	N	*	*	N	N		X
	M-10			*	*	**	**	N	*	*	*	N	N	N		

*-Indicates interest or use in terms of material.

**-" " especial interest or ability in relation to activities.

N-Indicates no provision or possession.

P-" " prohibited.

x-" " participation.

xx-" " frequent participation.

Blank space indicates no participation.

cases in the superior group having bicycles and using them frequently.

One child of the inferior group could swim, more than just paddle, compared to the six children in the superior group who swam.

In the inferior group, four cases were prohibited from climbing trees and the like, and only one case resorted to this practice as an activity interest. All but one of the superior group climbed about the yard, and four of these children were described as "little monkies, always climbing".

All of the girls in the superior group spent much time jumping rope, and the boys were known to have experienced this activity occasionally. Only one of the girls in the inferior group jumped rope frequently, and only one boy had experienced this activity more than a single time.

Table XI describes the play relations and type of activity of the selected cases. Playmates are recorded as being older or younger if child plays with one or the other in the more frequent situations, or not reported if the playmates are generally of the child's own age. Opposite attraction indicates that the child concerned spends more of his or her time with playmates of the opposite sex. The number of playmates in the neighborhood is disclosed for

each child by an indication of few or many. Where there were less than five in the immediate vicinity, it is reported as few; more than this number is indicated as many. Where a child plays with one or two playmates to the exclusion of a group of playmates, this is listed in the table as pal relationship.

After school activity is indicated as being active or passive, where this is markedly so for the particular child. Where the child fluctuates from one to the other in his play activity, no recording is made. The same is true as to whether a child engages in organized play, such as football, baseball games and group games, as compared to merely running around or playing with a sled, bicycle, or "just playing".

Where a child goes to the movies at least once a week, this is recorded, and also if he is a member of a club that meets once a week.

Rainy day activity was characterized as either active or quiet, although in all instances where the child displayed both, it was the general rule that was reported.

Those cases who received special instruction in piano, dancing or skating are listed as to the specific factor.

It is seen, in conclusion, from Table XI, that five of the superior cases play with older children, whereas seven of the inferior cases play with younger playmates;

TABLE XI

A Description of the Play Relations and Quality of Activity
of the Twenty Selected Cases

	Play-mates		Opposite Attraction	Number Children in Neighborhood	Group or Pal Relationship	After-School Activity		Random or Organized	Club Member	Movies	Rainy Days		Special Instruction
	Older	Younger				Active	Passive				Active	Quiet	
Superior Group													
Case F-1				xx	G	*		O			*		Piano Skating
F-2	*		*	xx	G	*				*	*		
F-3				x	G	*			*	*	*		Dance
F-4				xx	GP	*		O	*		*		Piano
F-5				x	P	*		R		*	*		Piano Dance
M-1	*			xx	G	*		O	*		*		
M-2	*			xx	G	*		O	*	*	*		
M-3				x	G	*		R		*	*		
M-4	*			xx	P	*		R			*		
M-5	*			xx	GP	*					*		
Inferior Group													
Case F-6	*			x	G		*	R	*		*		Dance
F-7		*	*	xx	P		*	R		*	*		
F-8		*	*	x	P			R		*	*		
F-9				xx	P		*	R		*	*		
F-10		*		xx	P			R	*		*		
M-6				xx	P		*			*	*		
M-7		*	*	x	P						*	*	Dance
M-8		*		x	P			R			*	*	
M-9		*		x	P			R			*	*	
M-10		*	*	x	P		*	R			*	*	Dance

* Indicates if associated with particular case.

x " few.

xx " many.

G " Group.

P " Pal.

O " Organized.

R " Random.

four of this latter group also indicate an opposite sex play relationship. Seven cases of the superior group had many playmates in the neighborhood and enjoyed their activity in group play, as compared to four cases of the inferior group who had many playmates in the neighborhood, and yet nine of the ten inferior cases preferred to play with either one or two playmates.

All of the superior group are seen to participate in active play interests, whereas four children of the inferior group chose interests of a more passive nature. Eight children of the inferior group similarly play in a random fashion, whereas four children of the superior group play more frequently in an organized manner.

The same number in each group belong to clubs, four. Five cases of the superior group attend movies, whereas only four cases of the inferior group go to the movies.

On rainy days, six cases of the superior group will tend to be more active, as compared to the inferior group listing eight cases who choose to interest themselves in something more of a quiet nature.

Special instruction is received by four children of the superior group and experienced at the present time, whereas of the three cases in the inferior group, none of the children reported participate in dancing lessons now.

At the time of testing the one-hundred and seventy-two third grade pupils, the height, weight and age, in

TABLE XII

A Comparison of the Age, Height, Weight and Grip Strength
of the Twenty Selected Cases

	Age in Months	Height in Inches	Weight in Pounds	Grip Strength
Superior Group				
Case F-1	104	50 3/4	58	55
F-2	113	54 1/4	61	74
F-3	104	56 1/2	60	56
F-4	103	51	61 1/4	67
F-5	102	51	56	65
M-1	115	57	65	60
M-2	104	51 1/2	66	80
M-3	104	54 3/4	72	70
M-4	103	53 1/4	68	62
M-5	96	53 1/4	69	80
X	104.5 (8.7)	53.32	63.6	66.9
Inferior Group				
Case F-6	98	57 1/2	75	38
F-7	112	48 1/4	50	40
F-8	99	52	61	38
F-9	94	54	87	56
F-10	104	49 3/4	54	39
M-6	99	51	51	62
M-7	94	48	51	65
M-8	99	54 3/4	69	70
M-9	102	50 1/2	62	58
M-10	104	52 3/4	64	59
X	100.5 (8.3)	51.85	62.4	52.5

X = Mean for particular item.

addition to the grip strength, using a hand dynamometer, was attained for each child.

Table XII expresses the age in months, height in inches, weight in pounds, and grip strength in terms of total pounds squeezed, left and right hand. The mean for each group was calculated and so recorded.

It is seen from the table that, with respect to age, height, weight and strength, accepting grip strength as a measure of strength, the superior group is older, taller, heavier and stronger than the inferior group.

The vastness of the investigation, and the description and portrayal of the many factors, does not lend itself to a single interpretation of the data revealed; for that reason, an inclusion of an individual case report in the Appendix is called to the reader's attention once again.

The chapter that follows will attempt to summarize the data here presented, and disclose certain conclusions as suggested from the investigation.

In a study of this type, certain limitations must be

recognized. Although the case study technique permits a

CHAPTER IV

SUMMARY AND CONCLUSIONS

This investigation has utilized the case study technique in an attempt to discover certain characteristics which are common to children who display unusual skill in certain motor performance tests. It has also attempted to learn more about the characteristics of those showing poor performance on these tests, as well as to examine certain environmental factors which may be associated with the quality of performance.

In order to isolate both good and poor performers for further study, one hundred and seventy-two third grade pupils from the schools of four representative towns were tested. From this number, the ten most superior performers, and the ten most inferior performers, five girls and five boys in each group, were selected for investigation.

The investigation involved a compilation of data from the school records, and a personal interview with the teacher and parent of each respective case. Most of the questions and items selected for investigation were those reported in previous research and the current literature on motor development.

In a study of this type, certain limitations must be recognized. Although the case study technique permits a

rather thorough study of each individual child's background, the number of cases studied is too few to warrant definite conclusions. The fact that extremes have been studied does not permit for generalizations concerning the middle group. The subjective nature of the interview technique must be considered as an additional limiting factor. The conclusions stated indicate general trends only, and are applicable only insofar as the cases studied are representative.

The terms "superior group" and "inferior group" are used solely for the purpose of designating and comparing one group from the other, and denote merely tendency toward these extremes.

In analysis of the data gathered from this investigation, it is seen that the superior cases tended to be, on the whole, older, taller, heavier and stronger than the inferior group.

As disclosed from the school records and the teacher interviews, the superior group appeared to be more intelligent and more capable in reading, writing, drawing, and general learning ability than the inferior cases. The intelligence quotients for the superior cases tended to be higher than those of the inferior group, yet there was also a greater range in intelligence quotients amongst the superior group than in the inferior group.

There were shown to be a greater number of inferior

cases starting school earlier than in the superior group. With respect to social relations and personality traits, as subjectively evaluated by the teacher, those of the inferior group tended, in general, to be of a less desirable nature than those of the superior group. In the latter group, a lesser number displayed nervous habits, and were shown to be more active, popular, calm, resourceful, attentive and cooperative than the inferior group. The superior group was described as being predominantly leaders.

In comparison, the majority of the inferior group were classified as followers in their play relations, and a greater number were listed as being retiring, tense and shy. Absence from school was more frequent for the inferior group than for the superior group.

Investigation of the selected cases by means of the parent interview disclosed many rather definite trends and implications.

Although the inferior group numbered a greater listing of parents extending their education to college, there were also a greater number of the parents in the inferior group who completed only grammar school, as compared to the number of parents in the superior group.

The parents of the superior group participate more freely and actively in sports than do the parents of the inferior group. Mothers of the superior cases were younger

at the birth of the particular child, in general, and fewer of these mothers experienced pregnancy or birth difficulties, as compared to the mothers of the children of the inferior group. Fewer cases of the inferior group had more than one brother or sister, as compared to cases in the superior group. There were more older brothers and sisters of the cases in the superior group than in the inferior group cases.

The occurrence of eating and sleeping difficulties, of nervous tensions, and of complicated illnesses, was more frequent among the inferior group than the superior group. More children were retarded, or advanced by more than two years, in their physical development, in the inferior group, and had infant and childhood illnesses following closely after one another than in the superior group.

As a whole, the superior group walked at an earlier age than did the inferior group, and in their play activity resorted to a more active and gross-type of activity than did the inferior group. They had a greater number of play materials necessitating large muscle activity in their homes than did the inferior group, and on the whole demonstrated a wider variety of abilities and activity in play and sport skills. The inferior group tended to have more adults other than the immediate family living in the same house, and although the homes were neater and the houses more fashionable, the superior cases gave greater evidence of belonging to

lived-in homes, and having homes where activity was not minimized or restricted.

Older playmates and group relationship in neighborhoods of many, rather than a few children, characterized the superior group, whereas the inferior group had a greater number playing with only a few younger playmates. In addition, this relationship was with children of the opposite sex, and in a neighborhood where a few children was the rule rather than the exception.

The inferior group in play interests showed a greater tendency toward manipulative activity of a more passive and random nature. On the whole, they were more quiet in their rainy day activities than the superior group.

The number receiving special instruction in such activities as piano, dance and sports were the same for each group, but whereas the inferior group had, in each case, discontinued this experience, the superior group were all continuing their interest.

Greater opportunity and provisions for play were associated with the superior group. They had more adequate yards, and frequented the playgrounds oftener, than was true for the inferior group. Surprisingly, the inferior group, as a whole, lived nearer to the playgrounds than did the superior group, yet played less at this area than did the superior group.

More of the inferior group remained at home during the summer months, where a greater number of the superior group had opportunities for going away, attending camp and taking trips.

Although differences between the two groups were only slight at times, and individual variances must be considered, there were still these general trends and tendencies for the respective groups.

Generalization in relation to the conclusion of this study is exceedingly hazardous, yet this much may be implied: The superior group, as a general rule, appeared to be better adjusted children in their school experience and relations, had fewer irregularities and difficulties in their infant and early childhood years, and appear now to have more wholesome and well-integrated personalities. Opportunities for play, provisions, interests and motivational influences tended to be more predominant and more conducive for gross motor development within the superior group.

Educational Implications. Since the physical status of the child may influence motor development, it is essential that deviations from the normal be recognized at an early age if the child is to attain optimal growth in motor skills. There are numerous instruments and means that might be employed to chart the progress of an individual regularly, and follow his growth and development in this respect.

More of the inferior group remained at home during the summer months, where a greater number of the superior group had opportunities for going away, attending camp and taking trips.

Although differences between the two groups were only slight at times, and individual variances must be considered, there were still these general trends and tendencies for the respective groups.

Generalization in relation to the conclusion of this study is exceedingly hazardous, yet this much may be implied: The superior group, as a general rule, appeared to be better adjusted children in their school experience and relations, had fewer irregularities and difficulties in their infant and early childhood years, and appear now to have more wholesome and well-integrated personalities. Opportunities for play, provisions, interests and motivational influences tended to be more predominant and more conducive for gross motor development within the superior group.

Educational Implications. Since the physical status of the child may influence motor development, it is essential that deviations from the normal be recognized at an early age if the child is to attain optimal growth in motor skills. There are numerous instruments and means that might be employed to chart the progress of an individual regularly, and follow his growth and development in this respect.

Up to and including the third grade level, there appears to be no divergent difference, on the whole, between the play activity and interests of boys and girls. In order to insure proper motor development of children in the primary grades, adequate opportunity must be given development of certain basic motor skills. Since the sex differences at this age are not great, this can be accomplished through the use of a program which includes similar activities for boys and girls. However, care must be taken in the selection of the activities, in that they must be of a type which affords ample opportunity for practice of these basic skills. As this study points out, the interests of the sexes in motor activities are similar. Hence, the use of a common program would appear to be justified.

In that play is an essential of childhood, and toys and materials the tools of play, the schools, and more especially the parents, can aid considerably in providing the proper type of play materials and facilities. Selecting, providing, directing and instructing the use of play materials can greatly enhance the learning and development of skills and abilities of the young child, and in this, the home and school have a real responsibility.

Up to and including the third grade level, there appears to be no divergent difference, on the whole, between the play activity and interests of boys and girls. In order to insure proper motor development of children in the primary grades, adequate opportunity must be given development of certain basic motor skills. Since the sex differences at this age are not great, this can be accomplished through the use of a program which includes similar activities for boys and girls. However, care must be taken in the selection of the activities, in that they must be of a type which affords ample opportunity for practice of these basic skills. As this study points out, the interests of the sexes in motor activities are similar. Hence, the use of a common program would appear to be justified.

In that play is an essential of childhood, and toys and materials the tools of play, the schools, and more especially the parents, can aid considerably in providing the proper type of play materials and facilities. Selecting, providing, directing and instructing the use of play materials can greatly enhance the learning and development of skills and abilities of the young child, and in this, the home and school have a real responsibility.

CHAPTER V

SUGGESTIONS FOR FURTHER STUDY

Studies of the influence of additional environmental factors upon the motor proficiency of young children would seem to be warranted. Little scientific evidence is now available concerning the differences and similarities which exist in the motor development of young children residing in congested cities as compared to those living in rural areas.

If opportunity and facilities for play and the use of play materials are influential in the development of motor skills, it would certainly be desirable to know within limits at what stage in the child's development these opportunities and provisions might best be introduced. It is recognized that the many variables and influences associated with an attempt to discover this "readiness" would prove difficult in such a study, but whatever findings from research in this area are developed, the value would be of real importance.

A rather natural and logical questioning as a result of this present study is, "Will these same children demonstrate the degree of superior or inferior performance, as indicated

CHAPTER V
SUGGESTIONS FOR FURTHER STUDY

Studies of the influence of additional environmental factors upon the motor proficiency of young children would seem to be warranted. Little scientific evidence is now available concerning the differences and similarities which exist in the motor development of young children residing in congested cities as compared to those living in rural areas.

If opportunity and facilities for play and the use of play materials are influential in the development of motor skills, it would certainly be desirable to know within limits at what stage in the child's development these opportunities and provisions might best be introduced. It is recognized that the many variables and influences associated with an attempt to discover this "readiness" would prove difficult in such a study, but whatever findings from research in this area are developed, the value would be of real importance.

A rather natural and logical questioning as a result of this present study is, "Will these same children demonstrate the degree of superior or inferior performance, as indicated

by their present performance, as growth continues?" A longitudinal study of this nature might possibly indicate whether children of a particular level of gross motor skill tend to remain at the same level, in comparison to others, at a later age; and if not, what additional environmental factors have been introduced that may possibly be associated with this transfer to a different level of achievement.

Studies in relation to the acquisition of gross motor skill are surprisingly few in number, as compared to other areas of investigation in child development and growth. More particularly has that age level characteristic of primary school children been neglected. Assuming that this is the period of time when a child is in the process of developing the basic motor and physical skills, considerable and valuable knowledge may be added to the already important information on child growth and development in relation to gross motor skill by the undertaking of studies of such a nature as indicated.

Denise, W., "Infant Development Under Conditions of Restricted Practice and of Minimum Social Stimulation", Journal of Genetic Psychology, (1938), 53: 149-157.

Levy, W., Behavior Development in Infants, Columbia University Press, New York, 1935.

Freeman, F., How Children Learn, Houghton Mifflin Company, Boston, 1917.

Oates, A. and Taylor, W., "An Experimental Study in the Nature of Improvement from Practice in a Motor Function", Journal Educational Psychology, (1926), 17: 326-335.

of their present performance, a "growth standard" is
theoretical study of this nature, which possibly indicates
whether children of a particular level of gross motor skill
tend to remain at this level, in comparison to others,
at a later age; and if not, what additional activities may
be necessary to be introduced that may possibly be suggested
when the tendency to a different level of achievement.
Studies in relation to the acquisition of gross motor
skill are particularly few in number, as compared to other
areas of investigation in child development and growth.
More particularly, few studies are available of
primary school children, which is regrettable. Assuming that this
is the period of time when a child is in the process of de-
veloping the basic motor and physical skills, considerable
and valuable knowledge may be added to the already important
information on child growth and development in relation to
gross motor skill by the undertaking of studies of such a
nature as indicated.

BIBLIOGRAPHY

- Alschuler, R., Two to Six, Morrow and Company, New York, 1937.
- Anderson, John E., Mimeographed Materials Prepared for a Conference on Research in Child Development, Part I, Toronto, Canada, 1929.
- Andrus, R., An Inventory of the Habits of Children Two to Four Years of Age, Teachers College, Columbia University, 1924.
- Bailey, E., Laton, A. and Bishop E., Principles of Child Study, McGraw-Hill Book Company, New York, 1933.
- Barker, R., Kounin, J. and Wright, H., Child Behavior and Development, McGraw-Hill Book Company, New York, 1943.
- Breckenridge, M. and Vincent, E., Child Development, W. B. Saunders Company, Philadelphia, 1943.
- Carmichael, L., Manual of Child Psychology, Wiley Book Company, New York, 1946.
- Cunningham, B., "An Experiment in Measuring Gross Motor Development of Infants and Young Children", Journal of Educational Psychology, (1927), 18: 458-464.
- Damann, V. T., "Developmental Changes in Attitude as One Factor Determining Energy Output in a Motor Performance", Child Development, (1941), 12: 241-246.
- Dearborn, W. and Rothney, J., Predicting the Child's Development, Sci-Art Publishers, Cambridge, (1941).
- Dennis, W., "Infant Development Under Conditions of Restricted Practice and of Minimum Social Stimulation", Journal of Genetic Psychology, (1938), 53: 149-157.
- Dewey, E., Behavior Development in Infants, Columbia University Press, New York, 1935.
- Freeman, F., How Children Learn, Houghton Mifflin Company, Boston, 1917.
- Gates, A. and Taylor, G., "An Experimental Study in the Nature of Improvement from Practice in a Motor Function", Journal Educational Psychology, (1926), 17: 226-236.

BIBLIOGRAPHY

- Alschuler, H., Two to Six, Morrow and Company, New York, 1937.
- Anderson, John E., Unpublished Materials Prepared for a Conference on Research in Child Development, Part I, Toronto, Canada, 1939.
- Barrett, R., An Inventory of the Habits of Children Two to Four Years of Age, Teachers College, Columbia University, 1934.
- Bell, E., and and and, Principles of Child Study, McGraw-Hill Book Company, New York, 1933.
- Berkley, H., and and, Child Behavior and Development, McGraw-Hill Book Company, New York, 1933.
- Berkley, H., and and, Child Development, W. B. Saunders Company, Philadelphia, 1933.
- Chapman, L., Manual of Child Psychology, Wiley Book Company, New York, 1935.
- Gunderson, H., "An Experiment in Measuring Gross Motor Development of Infants and Young Children", Journal of Educational Psychology, (1937), 30: 452-55.
- Gunn, V. F., "Developmental Changes in Action as One Factor Determining Energy Output in a Motor Performance", Child Development, (1941), 12: 241-246.
- Hartman, W. and Hohnsby, J., Exploring the Child's Development, East-West Publishers, Cambridge, (1931).
- Harris, W., "Infant Development Under Conditions of Restricted Practice and of Minimum Social Stimulation", Journal of Genetic Psychology, (1938), 53: 149-157.
- Havry, E., Genetic Development in Infants, Columbia University Press, New York, 1935.
- Kennell, J., How Children Learn, Houghton Mifflin Company, Boston, 1937.
- Kelly, A. and Kelly, G., "An Experimental Study in the Nature of Movement from Position to a Motor Position", Journal of Educational Psychology, (1930), 21: 255-258.

- Gesell, A., Infancy and Human Growth, The MacMillan Company, New York, 1928.
- Gesell, A. and Lord, W., "A Psychological Comparison of Nursery School Children from Homes of High and Low Economic Status", Pedagogical Seminar, (September, 1927), 34: 339-356.
- Gesell, A. and Thompson, H., "Learning and Growth in Identical Infant Twins", An Experimental Study by the Method of Co-Twin Control, Genetic Psychology Monographs, (1929), 6: 1-124.
- Gesell, A. and Others, "The First Five Years of Life: A Guide to the Study of the Pre-School Child", Harper and Brothers, New York, 1940.
- Goodenough, F., "Relation of Intelligence of Pre-School Children to Education of Parents", School and Society, (1927), 26: 54-56.
- Goodenough, F. and Anderson, J., Experimental Child Study, Century Company, New York, 1931.
- Goodenough, F. and Brian, C., "Certain Factors Underlying the Acquisition of Motor Skills in Pre-School Children", Journal of Experimental Psychology, (1929), 12: 127-155.
- Halverson, H., "Acquisition of Skill in Infancy", Journal of Genetic Psychology, (September, 1933), 43: 3-48.
- Hicks, J., "Acquisition of Motor Skill in Young Children", Child Development, (1930), 1: 90-105.
- Hurlock, E., Modern Ways with Children, Whittlesey House, New York, 1943.
- Inskeep, A., Child Adjustment in Relation to Growth and Development, D. Appleton Company, New York, 1930.
- Jersild, A., Child Psychology, Prentice-Hall, Inc., New York, 1947.
- Johnson, M., "Effect of Behavior of Variations in Amount of Play Equipment", Child Development, (1935), 6: 56-68.
- Jones, H., "An Adolescent Growth Study", Journal of Consulting Psychology, (1939), 3(5): 157-159.

- Jones, T., "The Development of Certain Motor Skills and Play Activities in Young Children", Child Development Monograph, 26, (1929), Teachers College, Columbia University, New York.
- Kawin, E., The Wise Choice of Toys, University of Chicago Press, Chicago, Illinois, 1938.
- Leonard, E., Miles, L. and Van der Kar, C., The Child at Home and School, American Book Company, New York, 1942.
- McGraw, M., Growth: A Study of Johnny and Jimmy, D. Appleton Century Company, New York, 1935.
- Munn, N., Psychological Development, Houghton Mifflin Company, Boston, 1938.
- Murchison, C. (Editor), Handbook of Child Psychology, Clark University Press, Worcester, 1933.
- Norsworthy, N. and Whitley, M., Psychology of Childhood, The MacMillan Company, New York, 1933.
- Richardson, H., "Growth of Adaptive Behavior in Infants, an Experimental Study of Seven Age Levels", Genetic Psychological Monographs, (1932), Vol. 12, Nos. 3-4.
- Roberts, M., "A Study of Child's Play in the Home Environment", University of Iowa Studies in Child Welfare, Vol. 8, Part 2, (1934).
- Seashore, R., "Individual Difference in Motor Skills", Journal of Genetic Psychology, (1930), 3: 38-65.
- Seils, L., "Study to Determine the Relationship between Physical Growth Measures and Gross Motor Performance of Primary School Children", Unpublished Dissertation, Boston University, 1948.
- Sherborn, F., The Child: Its Origin and Development and Care, McGraw-Hill, New York, 1934.
- Smith, S., "Influence of Illness During First Two Years on Infant Development", Journal of Genetic Psychology, (1931), 39: 284-287.
- Strang, R., An Introduction to Child Study, The MacMillan Company, New York, 1938.

Wellman, B., "Motor Coordination in Young Children - An Experimental Study in Control of Head and Arm Movements", University of Iowa Studies in Child Welfare, Vol. 3, No. 4, (1926).

Wetzel, N., "Physical Fitness in Terms of Physique, Development and Basal Metabolism, with a Guide to Individual Progress from Infancy to Maturity", Journal of the American Medical Association, Vol. 116, No. 12, (1941).

Witty, P., A Study of Deviates in Versatility and Sociability of Play Interest, Teachers College, Columbia University, 1931, New York.

Test Performance of The Twenty Selected Carnal Mean and
Standard Deviation of 178 Cases Tested

	NO-Test Cases	Standard Score	Balance Test	Standard Score	Agility Test	Standard Score	Speed Jump	Standard Score	Throwing Test	Standard Score	Penalium Building	Standard Score	Outshing Test	Standard Score	Speed Motor	Agility Score
Superior Group																
Case 7-1	8.0	30	60	83	13	68	65	69	130	88	10-100 score	20	50	50	84	84
7-2	7.8	29	43	73	14	69	65	74	180	88	10-100 score	20	50	50	84	84
7-3	7.6	28	43	73	12	70	65	75	181	88	10-100 score	20	50	50	84	84
7-4	7.4	27	43	73	14	69	65	70	129	88	10-100 score	20	50	50	84	84
7-5	8.0	30	43	73	12	70	65	70	134	88	10-100 score	20	50	50	84	84
8-1	7.7	28	43	73	15	77	65	73	94	88	10-100 score	20	50	50	84	84
8-2	8.3	30	43	73	12	77	65	73	83	88	10-100 score	20	50	50	84	84
8-3	7.8	29	43	73	13	73	65	70	33	88	10-100 score	20	50	50	84	84
8-4	7.6	28	43	73	13	73	65	70	188	88	10-100 score	20	50	50	84	84
8-5	8.1	30	43	73	13	73	65	70	275	88	10-100 score	20	50	50	84	84
Inferior Group																
Case 9-6	10	30	3.6	44	8	31	36	41	70	30	10-100 score	30	8	44	204	204
9-7	8.8	27	12.0	43	11	50	33	37	83	44	10-100 score	30	8	12	278	278
9-8	9.0	28	1.5	44	9	38	30	48	94	44	10-100 score	30	8	23	282	282
9-9	9.0	28	7.5	43	7	25	31	34	86	44	10-100 score	30	7	28	278	278
9-10	7.4	28	11.5	43	8	31	30	33	62	37	10-100 score	30	8	4	270	270
10-6	8.3	23	3.0	43	12	50	35	38	218	50	10-100 score	40	5	23	285	285
10-7	9.3	27	6.7	44	9	37	42	47	169	30	10-100 score	50	5	17	262	262
10-8	8.2	26	4.2	44	10	47	35	36	137	36	10-100 score	31	8	23	281	281
10-9	8.0	26	3.5	44	10	43	34	35	94	33	10-100 score	31	8	30	294	294
10-10	8.3	23	2.6	42	9	37	30	29	36	18	10-100 score	31	3	10	270	270
Mean for 80 Female Performers																
	8.0	13			11	43		109		5		9				
Standard Deviation																
	.69	14.4			1.5	4.9		35.9		1.4		1.6				
Mean for 92 Male Performers																
	8.1	10			11	44		220		4		9				
Standard Deviation																
	.61	10.3			1.5	6.3		58.7		2.1		1.5				

Test Performance of the Twenty Selected Cases: Mean and
Standard Deviation of 172 Cases Tested

	40-Yard Dash	Standard Score	Balance Test	Standard Score	Agility Test	Standard Score	Broad Jump	Standard Score	Throwing Test	Standard Score	Pendulum Striking	Standard Score	Catching Test	Standard Score	Gross Motor Ability Score
Superior Group															
Case F-1	8.0	59	60	83	13	62	55	69	130	56	6	56	10	56	441
F-2	7.8	62	43	71	14	69	45	54	165	66	9	72	10	56	450
F-3	7.6	64	32	63	11	50	41	49	251	90	6	56	10	56	428
F-4	8.1	57	26.5	60	14	69	56	70	129	56	5	50	9	50	412
F-5	8.2	56	33	64	12	56	56	70	134	57	6	56	10	56	415
M-1	7.5	60	9	49	15	77	46	53	262	57	8	60	10	57	413
M-2	6.9	70	25.5	66	12	57	43	49	291	62	9	64	10	57	425
M-3	7.2	65	9	49	13	63	57	61	331	69	7	55	10	57	419
M-4	7.6	58	29	68	13	63	53	64	193	5	5	45	10	57	401
M-5	8.1	50	60	99	13	63	44	50	275	59	4	40	10	57	418
Inferior Group															
Case F-6	10	30	3.5	44	8	31	36	41	70	39	3	39	8	44	268
F-7	8.8	47	12.0	49	11	50	33	37	86.5	44	3	39	3	12	278
F-8	9.0	44	3.5	44	9	38	39	46	94	46	3	39	5	25	282
F-9	9.0	44	2.5	43	7	25	31	34	86	44	5	50	7	38	278
F-10	9.4	38	10.4	48	8	31	30	33	62	37	3	39	8	44	270
M-6	8.5	43	3.0	43	11	50	35	36	219	50	4	40	5	23	285
M-7	9.5	27	4.7	45	9	37	42	47	159	39	6	50	4	17	262
M-8	8.2	48	4.2	44	10	43	35	36	137	36	2	31	8	43	281
M-9	8.0	52	3.5	44	10	43	34	35	94	29	2	31	6	30	264
M-10	8.8	43	2.4	42	9	37	30	29	36	18	2	31	3	10	210
Mean for 80 Female Performers															
	8.6	13			11	42			109		5		9		
Standard Deviation															
	.69	14.4			1.6	6.9			35.9		1.8		1.6		
Mean for 92 Male Performers															
	8.1	10			11	44			220		6		9		
Standard Deviation															
	.61	10.3			1.5	6.5			58.7		2.1		1.5		

PARENT INTERVIEW INSTRUMENT

Birthplace:- Mother _____ Father _____

Generations in State:- M _____ F _____

Education:- Mother; Grad. _____ High _____ College _____

Father; Grad. _____ High _____ College _____

Occupation:- Father. _____ Time spent home; evenings _____
weekends _____

Mother. _____ When _____

Residence:- Same before present site; Rural _____ Urban _____
City _____ Yr. of child's life _____

Participation in athletic _____; School _____ Now _____
Father; School _____ Now _____

Illness, injuries during child's life:- Mother _____
Father _____

Mother's age at child's birth _____ First, 2nd, 3rd, etc., child

Difficulties before birth, during pregnancy:
at birth _____

Feeding response:- Bottle _____ Breast _____ Good _____ Poor _____

Feeding habits:- Healthy _____ Small _____ Fussy _____ Regular _____

Sleeping habits:- Infant naps: Regular _____ Irregular _____ When _____
Hours sleep each day _____ Calm _____ Restless _____

Toothings:- First tooth, year _____ Difficulty _____ Normal _____

Termination finger-thumb suckings:- Year _____

Nervous habits:- Stuttering _____ Nail biting _____
Stammering _____

PARENT INTERVIEW INSTRUMENT

Birthplace:- Mother_____ Father_____

Generations in States:- M_____ F_____

Education:- Mother; Gram._____ High_____ College_____

Father; Gram._____ High_____ College_____

Occupation:- Father._____ Time spent home; evenings_____
weekends_____
Mother._____ When_____

Residences:- Home before present site; Rural_____ Urban_____
City_____ Yr. of child's life _____

Participation in athletics:- Mother; School_____ Now_____
Father; School_____ Now_____

Illness, Injuries during child's life:- Mother_____
Father_____

Mother's age at child's birth_____ First, 2nd, 3rd, etc., child

Difficulties before birth, during pregnancy:
at birth

Feeding response:- Bottle_____ Breast_____ Good_____ Poor_____

Eating habits:- Healthy_____ Small_____ Fussy_____ Regular_____

Sleeping habits:- Infant naps: Regular_____ Irregular_____ When_____
Hours sleep each day_____ Calm_____ Restless_____

Teething:- First tooth, year_____ Difficulty_____ Normal_____

Termination finger-thumb sucking:- Year_____

Nervous habits:- Stuttering_____ Nail biting_____
Stammering_____

PARENT INTERVIEW INSTRUMENT

Birthplace: - Mother _____ Father _____
 Generations in States: - M _____ F _____
 Education: - Mother; Gram. _____ High _____ College _____
 Father; Gram. _____ High _____ College _____
 Occupation: - Father. _____ Time spent home; evenings _____
 weekends _____
 Mother. _____ When _____
 Residence: - Home before present site; Rural _____ Urban _____
 City _____ Yr. of child's life _____
 Participation in athletics: - Mother; School _____ Now _____
 Father; School _____ Now _____
 Illness, injuries during child's life: - Mother _____
 Father _____
 Mother's age at child's birth _____ First, 2nd, 3rd, etc., child _____
 Difficulties before birth, during pregnancy: _____
 at birth _____
 Feeding response: - Bottle _____ Breast _____ Good _____ Poor _____
 Eating habits: - Healthy _____ Small _____ Fussy _____ Regular _____
 Sleeping habits: - Infant naps: Regular _____ Irregular _____ When _____
 Hours sleep each day _____ Awake _____ Restless _____
 Teething: - First tooth, year _____ Difficulty _____ Normal _____
 Termination finger-thumb sucking: - Year _____
 Nervous habits: - Stuttering _____ Nail biting _____
 Stammering _____

Age at walking alone_____

Infant illnesses:- Injuries, diseases;

What

When

Complications

Childhood handicaps:-

Defects:-

Siblings:- Sex_____ Age_____ Schooling_____

Playmates:- Age_____ Nearness:-

Sex_____ No. in Neigh:-

Leader___ Follower___ Gang___ Club___

Activities:- After School_____ Sats. Sundays_____

Rainy days_____

Active_____ Passive_____

Nurse_____ Nursery School_____

Tutor___ Special Instructor___: Piano___ Dance___ Swim___

Skating___ etc.

Summer Vacations:- Home___ Camp - Season___ Family trips___
Day_____

Toys liked best - Infant:-

Blocks___ Crayons___ Bead board___ Pounding table___

Kitty car___ Games___ Tricycle___

Childhood Activities:-

Scooter___ Bicycle___ Roller___ Ice Skates___

Jump rope___ Sewing___ Housekeeping___

Clubs:-

Home Provisions for Play:- Yard___ Playroom___ Cellar___

Swing___ Ladder___ Bars___ Sand-boxes___

Playground, parks:- Frequented___ Nearness___

Facilities and equipment:-

Remarks:-

Remarks:-

Facilities and equipment:-

Playground, games:-, playground, games:-

Home provisions for play:-, Home provisions for play:-, Home provisions for play:-

Classes:-, Classes:-, Classes:-, Classes:-, Classes:-

Children's activities:-, Children's activities:-, Children's activities:-

Teacher's activities:-, Teacher's activities:-, Teacher's activities:-

Shedding, etc.

Factor special instructor: Piano, French, Latin

Nurse, Nurse, Nurse

Activities, Activities, Activities

Religious days

Activities:-, Activities:-, Activities:-, Activities:-

Leader, Leader, Leader

Box, Box, Box

Playmates:-, Playmates:-, Playmates:-

Children:-, Children:-, Children:-, Children:-

Defects:-

Children's handwriting:-

Complications

What

Initial illnesses:-, Initial illnesses:-, Initial illnesses:-

Age at writing alone

TEACHER INTERVIEW INSTRUMENT

Name _____

Address _____ Telephone No. _____

Age _____ Sex _____ Grade _____ Place of Birth _____

Fingerprints _____

Special classes _____

Achievement: C.A. _____ M.A. _____ I.C. _____

Score _____

Other Test Scores _____

Number Absences first two grades: _____

APPENDIX C

Promotions _____ Retentions _____

Teacher Evaluation:

Active _____ Sedentary _____ Passive _____

Handiness _____

Expression of Emotion _____

Reading ability E G F P

Writing ability E G F P

Drawing ability _____

Learning ability E G F P Slow _____ Difficult _____

Rapidly _____, Comprehends easily, readily

Personality Factors:

Anxious _____ Inquiring _____ Stubborn _____ Resourceful _____

Calm _____ Tense _____ Imaginative _____ Independent _____

Cooperative _____ Shy _____ Nervous _____ Attractive _____

APPENDIX C

TEACHER INTERVIEW INSTRUMENT

Name _____

Address _____ Telephone No. _____

Age _____ Sex _____ Grade _____ Place of Birth _____

Kindergarten _____

Special classes _____

Achievement: C.A. _____ M.A. _____ I.Q. _____

Marks _____

Other Test Scores _____

Number Absences first two grades: _____

Promotions _____ Retardations _____

Teacher Evaluation:

Active _____ Sedentary _____ Passive _____

Handedness _____

Expression of Tension _____

Reading ability E G F PWriting ability E G F P

Drawing ability _____

Learning ability E G F P Slow _____ Difficult _____

Rapidly _____, Comprehends easily, readily

Personality Factors:

Anxious _____ Inquiring _____ Stubborn _____ Resourceful _____

Calm _____ Tense _____ Imaginative _____ Independent _____

Cooperative _____ Shy _____ Nervous _____ Attentive _____

TEACHER INTERVIEW INSTRUMENT

Name _____

Address _____ Telephone No. _____

Age _____ Sex _____ Grade _____ Place of Birth _____

Kindergarten _____

Special classes _____

Achievement: C.A. _____ M.A. _____ I.O. _____

Marks _____

Other Test Scores _____

Number Absences first two grades: _____

Promotions _____ Retardations _____

Teacher Evaluation:

Active _____ Sedentary _____ Passive _____

Handiness _____

Expression of tension _____

Reading ability _____ E _____ G _____ F _____ P _____

Writing ability _____ E _____ G _____ F _____ P _____

Drawing ability _____

Learning ability _____ E _____ G _____ F _____ P _____ Slow _____ Difficult _____

Rapidly _____, Comprehends easily, readily _____

Personality Factors:

Anxious _____ Inquiring _____ Stubborn _____ Resourceful _____

Calm _____ Tense _____ Imaginative _____ Independent _____

Cooperative _____ Shy _____ Nervous _____ Attentive _____

Play Relations:

Retiring_____ Aggressive_____

Popular_____ Rejected_____ Well-Liked_____

Leader_____ Follower_____

Timid_____ Bold_____

Playmates: Age_____ Sex_____ Number_____

Teacher Remarks:

School Records:

Age starting school_____

Physical examination_____

(Since beginning school) Hgt._____

Wgt._____

Defects or limitations_____

Attention directed to_____

Notes sent home to parents_____

Play Relations:

Retiring	_____	Aggressive	_____
Popular	_____	Rejected	_____
Leader	_____	Well-liked	_____
Follower	_____		
Timid	_____	Bold	_____

Playmates: Age _____ Sex _____ Number _____

Teacher Remarks:

School Records:

Age starting school _____
Physical examination _____
(Since beginning school) Hgt. _____
Wgt. _____
Defects or limitations _____
Attention directed to _____
Notes sent home to parents _____

INDIVIDUAL REPORTS FOR THE TWENTY SELECTED CASES

Case 2-1

Claire was described by her teacher as being a leader in the class. "One of the brightest, most capable and likeable pupils", was the teacher's comment, "just like her older sister." A record of all the in-school and scholarship for the first two grades, she gave evidence of continuing this record beginning. Placed as a good reader, one quick to grasp and learn the material. Her difficulty in writing may be attributed to the fact that she writes with her left hand, but uses scissors, cutting utensils and the like, with her right hand - a conflict, perhaps. A popular leader, associating with children of her own age, she appears to be cooperative, resourceful and attentive, both in her class activity as well as on the playground. Her restlessness was explained by the teacher as being possibly due to her extreme active nature, in addition to the fact that her sister's superior record in school may possibly be being held up to her.

Residing now in a comfortable, well-furnished, spacious house, she formerly lived in Belmont in much the same type of two-family house for two years. During this time, when Claire was two years old, her father used to travel, but was always home week-ends.

Mother and father were both college graduates, the father being an auditor and accountant. Both parents participated in annual and college athletics, and even now play basketball, tennis, ping-pong, swim and skate with the children.

She has two sisters, one 11½ in the sixth grade, and the other 4½.

There was never any difficulty associated with her feeding, sleeping or eating habits, and now her mother reports a healthy, big appetite.

Until Claire was four years old, she had hay fever, but outgrew this. A dripping in her throat necessitated removal of her tonsils at this same age. Nose bleeds were a frequent occurrence during the last three years, but the family pediatrician reassured the parents it was of little concern.

A very close playmate of her older sister, Claire's mother described her as being happiest in a group, making friends easily with a number of other children in the neighborhood. Spends the greatest part of her time out-

APPENDIX D

APPENDIX D

INDIVIDUAL REPORTS FOR THE TWENTY SELECTED CASES

Case F-1

Claire was described by her teacher as being a leader in the class. "One of the brightest, most capable and likeable pupils", was the teacher's comment, "just like her older sister." A record of all A's in conduct and scholarship for the first two grades, she gave evidence of continuing this record beginning. Pictured as a good reader, one quick to grasp and learn the material. Her difficulty in writing may be attributed to the fact that she writes with her left hand, but uses scissors, eating utensils and the like, with her right hand - a conflict, perhaps. A popular leader, associating with children of her own age, she appears to be cooperative, resourceful and attentive, both in her class activity as well as on the playground. Her tenseness was explained by the teacher as being possibly due to her extreme active nature, in addition to the fact that her sister's superior record in school may possibly be being held up to her.

Residing now in a very fashionable, well-furnished, spaciouly-lawned house, she formerly lived in Belmont in much the same type of two-family house for two years. During this time, when Claire was two years old, her father used to travel, but was always home week-ends.

Mother and father were both college graduates, the father being an auditor and accountant. Both parents participated in school and college athletics, and even now play badminton, tennis, ping-pong, swim and skate with the children.

She has two sisters, one $11\frac{1}{2}$ in the sixth grade, and the other $4\frac{1}{2}$.

There was never any difficulty associated with her feeding, sleeping or eating habits, and now her mother reports a healthy, big appetite.

Until Claire was four years old, she had hay fever, but outgrew this. A dripping in her throat necessitated removal of her tonsils at this same age. Nose bleeds were a frequent occurrence during the last three years, but the family pediatrician reassured the parents it was of little concern.

A very close playmate of her older sister, Claire's mother described her as being happiest in a group, making friends easily with a number of other children in the neighborhood. Spends the greatest part of her time out-

INDIVIDUAL REPORTS FOR PRESENTLY SELECTED CASES

Case 7-1

Claire was described by her teacher as being a leader in the class. "One of the brightest, most capable and like-able pupils", was the teacher's comment. "Just like her older sister." A record of all A's in conduct and scholarship for the first two grades, and gave evidence of continuing this record beginning. Pictured as a good reader, one quick to grasp and learn the material. Her difficulty in writing may be attributed to the fact that she writes with her left hand, but uses scissors, eating utensils and the like, with her right hand - a conflict, perhaps. A popular leader, associating with children of her own age, she appears to be cooperative, resourceful and attentive, both in her class activity as well as on the playground. Her intense was explained by the teacher as being possibly due to her extreme active nature, in addition to the fact that her sister's superior record in school may possibly be being held up to her.

Residing now in a very fashionable, well-furnished, spacious house, she formerly lived in Belmont in much the same type of two-family house for two years. During this time, when Claire was two years old, her father used to travel, but was always home week-ends.

Mother and father were both college graduates, the father being an auditor and accountant. Both parents participated in school and college athletics, and even now play badminton, tennis, ping-pong, swim and skate with the children.

She has two sisters, one 1½ in the sixth grade, and the other 4½.

There was never any difficulty associated with her feeding, sleeping or eating habits, and now her mother reports a healthy, big appetite.

Until Claire was four years old, she had hay fever, but outgrew this. A dripping in her throat necessitated removal of her tonsils at this same age. Nose bleeds were a frequent occurrence during the last three years, but the family pediatrician reassured the parents it was of little concern.

A very close playmate of her older sister, Claire's mother described her as being happiest in a group, making friends easily with a number of other children in the neighborhood. Spends the greatest part of her time out-

doors, actively playing in group games, skating, jumping rope, and the like. Claire rarely goes to the movies, but goes skating at an indoor rink with her father, and plays baseball with the boys. When forced indoors, she is more apt to be engaged in gross activity, such as playing house, ball games, and so on, than crayoning, although she does enjoy making doll clothes and helping around the house.

Enjoys a sun room as a play room. She often will help her father in the cellar, and mows and rakes the lawn with him. Outdoors, she has a large play yard where trees, a swing and lawn games allow her freedom in activity.

An interesting comment of her mother's was that when Claire was five, upon returning from a dance recital, never having seen cartwheels and dance steps before, she immediately demonstrated a real proficiency from this one observation. Also, while only eleven months old, she would climb out of the play pen and run around the yard.

Summers are spent at a beach home, and here, as well as at the winter home, uncles and aunts, and other relatives, swim, play ball, and actively instruct the children in their play relations.

Aside from the playground not being too accessible, the immediate home and environment would seemingly encourage the child to play about the home. The general impression felt was that Claire had a very wholesome and desirable home background and active behavior.

Case F-2

Although an extremely active, tireless and energetic youngster on the playground, the teacher made reference to a wistful, slow, quiet, retiring behavior in the classroom. One who apparently craves affection, her attempts to co-operation and relations with others are rather of a bold, aggressive nature.

Joan was described as being very difficult to keep busy, having little concentration, and lacking thoroughness. She had repeated the first grade, and even now displayed below average reading, writing and learning ability. In the second grade, an instance of stealing and lying was discovered, but this was probably explained by the home con-

doors, actively playing in group games, skating, jumping rope, and the like. Claire rarely goes to the movies, but goes skating at an indoor rink with her father, and plays baseball with the boys. When forced indoors, she is more apt to be engaged in gross activity, such as playing house, doll games, and so on, than reasoning, although she does enjoy making doll clothes and helping around the house.

Enjoys a sun room as a play room. She often will help her father in the cellar, and mows and rakes the lawn with him. Outdoors, she has a large play yard where trees, a swing and lawn games allow her freedom in activity.

An interesting comment of her mother's was that when Claire was five, upon returning from a dance recital, never having seen carthorses and dance steps before, she immediately demonstrated a real proficiency from this one observation. Also, while only eleven months old, she would climb out of the play pen and run around the yard.

Summers are spent at a beach home, and here, as well as at the winter home, uncles and aunts, and other relatives, swim, play ball, and actively instruct the children in their play relations.

Aside from the playground not being too accessible, the immediate home and environment would seemingly encourage the child to play about the home. The general impression left was that Claire had a very wholesome and desirable home background and active behavior.

Case 1-2

Case 1-2

Although an extremely active, tireless and energetic youngster on the playground, the teacher made reference to a watchful, slow, quiet, reticent behavior in the classroom. One who apparently craves affection, her attempts to co-operation and relations with others are rather of a bold, aggressive nature.

John was described as being very difficult to keep busy, having little concentration, and lacking thoroughness. She had repeated the first grade, and even now displays below average reading, writing and learning ability. In the second grade, an instance of stealing and lying was discovered, but this was probably explained by the home con-

ditions. Her school health record reported needed attention for an ear condition during the first two grades. Withdrawing to herself in the classroom, on the playground she excels in games and contests, and in enjoying the relationship of others tends to be a little overbearing and bold; because of this, her leadership desire relegates her to being a follower.

Neither parent had finished high school, the mother having gone only as far as the eighth grade. The father had played all sports in school, and while working at the Navy Yard, and during the last few years, played organized softball.

Up until Joan was a year old, the family lived in a tenement house in Roxbury, but moved to Natick and a home of their own. Although the house was large, spacious and surrounded by quite an area for play space, it was a very old, rundown building.

Joan's mother has worked during the last nine years, and this necessitated a neighbor looking after the children through the daytime. For three months, when Joan was eight, her mother was forced to remain at home, having broken her leg.

A bleeding navel caused much concern at birth, and as an infant, Joan was ill with bronchial pneumonia when only three months old. This reoccurred at eleven months of age. An eye infection at seven years, and trouble with her ears causing them to be lanced, were the marked instances of real illness and injury. Feeding, and sleeping habits, were always responsive, and it is only recently that her good appetite has tended to be a little fussy. This is explained by her mother saying that she has too much money for candy. Lately, Joan has been tardy about getting to bed, but this is infrequent.

All brothers and sisters are older, two boys being 18 and 13, the two girls 20 and 17. Although there is a definite family relationship, generally Joan's playmates are those of the neighborhood, and largely with the older boys. She spends considerable time on the school playground, although she has a large yard in which to play at home. Her activity is outdoors, when possible, and is of an active nature, such as playing baseball, football and group games. When forced indoors, her mother described her as simply "raising cain". She skates, swims, and bicycles with a group, and as her mother described - is a regular little tomboy.

ditions. Her school health record reported needed attention for an ear condition during the first two grades. With- drawing to herself in the classroom, on the playground and excels in games and contacts, and in enjoying the relation- ship of others tends to be a little overbearing and bold; because of this, her leadership desire releases her to being a follower.

Neither parent had finished high school, the mother having gone only as far as the eighth grade. The father had played all sports in school, and while working at the Navy Yard, and during the last few years, played organized football.

Up until Joan was a year old, the family lived in a tenement house in Roxbury, but moved to Westick and a home of their own. Although the house was large, spacious and surrounded by quite an area for play space, it was a very old, rundown building.

Joan's mother has worked during the last nine years, and this necessitated a neighbor looking after the children through the daytime. For three months, when Joan was eight, her mother was forced to remain at home, having broken her leg.

A bleeding navel caused much concern at birth, and as an infant, Joan was ill with bronchial pneumonia when only three months old. This recurred at eleven months of age. An eye infection at seven years, and trouble with her ears causing them to be lanced, were the marked instances of real illness and injury. Feeding, and sleeping habits, were al- ways responsive, and it is only recently that her good appetite has tended to be a little fussy. This is explained by her mother saying that she has too much money for candy. Lately, Joan has been fairly about getting to bed, but this is infrequent.

All brothers and sisters are older, two boys being 18 and 15, the two girls 10 and 17. Although there is a defi- nite family relationship, generally Joan's playmates are those of the neighborhood, and largely with the older boys. She spends considerable time on the school playground, al- though she has a large yard in which to play at home. Her activity is outdoors, when possible, and is of an active nature, such as playing baseball, football and group games. When forced indoors, her mother described her as simply "raising Cain". She skates, swims, and plays with a group, and as her mother described - is a regular little tomboy.

She never had a zealous interest in reading or crayoning, but would rather play with toys, dolls, carts, doll carriage and games. Apparently, the mother's brother spent considerable time with the family, and when the other children weren't interested in playing catch, and so on, he directed his attention to Joan, as was true of the father. Joan would wrestle, help with carpentry, rake and mow the lawn with her uncle and father, and in general seemed to enjoy their company more than listening to the radio or reading, although she is a radio fan. Movies were a regular habit, going with her 17 year old sister.

Although Joan was not made of to the exclusion of the other children, and yet very definitely more aggressive and forceful, her mother recognized how much more superior in play activities she appeared as compared to the other children. Climbing trees, walking fences, were a challenge to Joan, where the others were not so inclined. Decidedly left much on her own, and rather neglected as far as guidance and direction, she apparently has profited and enjoyed a very active play relationship with her father and uncle.

Case F-3

"The kind of youngster you like to have around", was the teacher's comment. More quiet than active in the classroom, she displayed an energetic nature on the playground, and never seemed to tire of playing games, tag and the like. Very likeable, helping without being bold, her disposition made her popular with her classmates. Tending to be rather calm, when within a group, she will often take the lead, although she is described as a good follower.

Her reading and writing ability are classified as being good, and although only an average pupil, she shows marked talent in drawing. School records show an 'A' for health, and 'B' for conduct and scholarship for two years.

Mother and father both completed high school. The father has been employed as a mail carrier since graduation. Although never athletically inclined, Pat's father bowls and golfs now. The mother taught ballet and tap dancing, and both she and her husband spend quite a bit of time with the children, Pat having a younger sister and brother, ages 7 and 4, respectively.

Since Pat was 2 1/2, the family has resided in a rather modest single-family house in Natick. Certainly well lived-

She never had a real interest in reading or crayon-
ing, but would rather play with toys, dolls, cards, doll
carriage and games. Apparently, the mother's brother spent
considerable time with the family, and when the other
children weren't interested in playing catch, and so on, he
directed his attention to Joan, as was true of the father.
Joan would wrestle, help with carpentry, rake and mow the
lawn with her uncle and father, and in general seemed to
enjoy their company more than listening to the radio or
reading, although she is a radio fan. Movies were a regu-
lar habit, going with her 17 year old sister.

Although Joan was not made of to the exclusion of the
other children, and yet very definitely more aggressive and
forceful, her mother recognized how much more superior in
play activities she appeared as compared to the other child-
ren. Climbing trees, walking fences, were a challenge to
Joan, where the others were not so inclined. Decidedly left
much on her own, and rather neglected as far as guidance and
direction, she apparently has profited and enjoyed a very
active play relationship with her father and uncle.

Case 1-3

"The kind of youngster you like to have around", was
the teacher's comment. More quiet than active in the
classroom, she displayed an energetic nature on the play-
ground, and never seemed to tire of playing games, tag and
the like. Very likable, helping without being told, her
disposition made her popular with her classmates. Tending
to be rather calm, when within a group, she will often take
the lead, although she is described as a good follower.

Her reading and writing ability are classified as
being good, and although only an average pupil, she shows
marked talent in drawing. School records show an 'A' for
health, and 'B' for conduct and scholarship for two years.

Mother and father both completed high school. The
father has been employed as a mail carrier since graduation.
Although never athletically inclined, Pat's father bowls
and golf's now. The mother taught ballet and tap dancing,
and both she and her husband spend quite a bit of time with
the children, Pat having a younger sister and brother, ages
7 and 4, respectively.

Since Pat was 2 1/2, the family has resided in a rather
modest single-family house in Watlik. Certainly well lived-

in and not too well-furnished, the large yard and woods about the house make it a very desirable location.

A very calm and poised youngster, it was only as an infant that she appeared cranky, and this during her nursing. After measles in her first year, upon entering school at six years of age she contracted mumps, measles, and chicken pox, one right after another.

Although Pat spends considerable time with her sister, there are a few older boys, and two girls, in the same neighborhood, with whom she plays. Energetic and active in her play, on rainy days she will play school or house with her sister or her friends. Wheel toys, pounding table, kitty car and, especially, the tricycle, were early interests, not caring too much for dolls or the radio. Reading occupies much of her indoor time, as well as ping-pong and crafts work, which she does through her Brownies club.

Spending the majority of her summers at home, she swims at the lake, gardens with her father, and enjoys playing about in the woods. When visited by her many cousins, she plays catch and jumps rope, and organizes games with them. Quite often she visits the playground at school, and walks this mile and a half each day, rain or shine, during the school term.

With the wooded area about the house, Pat will always be found climbing trees, jumping around here and there. Her mother frankly admitted that she may be a little too liberal, but so far there have been no unfortunate experiences.

It was felt that, although a rather easy-going and not too strict a disciplinarian, the mother was quite interested in her children, and of a wonderful temperament. She confessed that at times she and her husband got out and played hopscotch with the girls, and jumped rope.

It was interesting to note that both mother and teacher remarked of Pat's slow, but very thorough and deliberate, learning behavior. In learning to ride a bicycle, and to ice skate, for instance, her mother noted how she kept at it, and would, in batting at a ball, when first playing, concentrate very intensely on the activity and not joke or fool over it.

A helter-skelter household, as her mother remarked, but seemingly a lot of pleasure and happiness therein.

Case F-4

Typically Swedish, calm, good-natured and robustly healthy, was the teacher's description. Active in and around school, she makes friends very easily, is a leader in her play activity, being a good athlete, and enthusiastic about her play. Persevering in her work, she reads, writes and learns well, having above-average ability in drawing.

Dorothy's mother completed the third year of high school, her father having graduated and started in carpentry work and truck driving. They have lived, since Dorothy's birth, in the present sixteen room, large old house, with the father's brother and family. A fire caused considerable damage three years ago, and the family has remodeled and refurnished the house into a very attractive home, making an especially nice playroom and sun porch for the children.

Although neither of the parents participated in sports in school, even now they go skating, skiing and coasting with the children. Dot has two sisters, one ten and the other four. The father was hospitalized and convalesced for nearly four months, a few years ago, but aside from this, there has been no alarming illness or injury to any member of the family.

Always a good nurser and eater, all the children have a passion for fruit. A good sleeper, and free from any nervous mannerisms, Dorothy did suck her finger in falling asleep until she was three years old.

Having an acre over which to romp, with a play house, swing, slide and lawn games, many of the children of the neighborhood play at Dot's home, although she does have one real close friend of her own age.

An outdoor skating rink next door, and the school playground in back, she has skated with the boys, played baseball and tennis, since last year. On rainy days, she will have others in, or will sit and color, read, or sew for her collection of dolls. Belonging to the Brownies, and playing the piano for two years, she will also practice or do her scout craft work.

Even during the winter, the entire family will go to New Hampshire, where they have a summer camp. Here she has learned to swim, skate, row, and find pleasure in tramping through the woods. The family will hike, pick strawberries, and garden together, and even go bicycling.

Case F-4

Typically Swedish, calm, good-natured and robustly healthy, was the teacher's description. Active in and around school, she makes friends very easily, is a leader in her play activity, being a good athlete, and enthusiastic about her play. Persevering in her work, she reads, writes and learns well, having above-average ability in drawing.

Dorothy's mother completed the third year of high school, her father having graduated and started in carpentry work and truck driving. They have lived, since Dorothy's birth, in the present sixteen room, large old house, with the father's brother and family. A fire caused considerable damage three years ago, and the family has remodelled and refurnished the house into a very attractive home, making an especially nice playroom and sun porch for the children.

Although neither of the parents participated in sports in school, even now they go skating, skiing and coasting with the children. Dot has two sisters, one ten and the other four. The father was hospitalized and convalesced for nearly four months, a few years ago, but aside from this, there has been no alarming illness or injury to any member of the family.

Always a good nurse and eater, all the children have a passion for fruit. A good sleeper, and free from any nervous mannerisms, Dorothy did suck her finger in falling asleep until she was three years old.

Having an acre over which to roam, with a play house, swing, slide and lawn games, many of the children of the neighborhood play at Dot's home, although she does have one real close friend of her own age.

An outdoor skating rink next door, and the school playground in back, she has skated with the boys, played baseball and tennis, since last year. On rainy days, she will have others in, or will sit and color, read, or sew for her collection of dolls. Belonging to the Brownies, and playing the piano for two years, she will also practice or do her about craft work.

Even during the winter, the entire family will go to New Hampshire, where they have a summer camp. Here she has learned to swim, skate, row, and find pleasure in tramp-ing through the woods. The family will hike, pick strawberries, and garden together, and even go bicycling.

Dorothy has a room with her older sister, and in addition to taking care of this, they have regular house duties and dish washing to do. Together, the sisters have made and dressed over twelve dolls. This doll care, in addition to crayoning, was quite a real interest until Dorothy learned to skate and cycle.

The fact that the father constructed a play house, swing and slide for the children, gives real evidence of his interest and activity with them. The mother remarked how wonderful he is with the children, and gives him the credit for their wholesomeness, but the fact that there is such a real family relationship attests to both their natures.

Case F-5

Described as the leading one in her class, Carol's teacher remarked on the excellence with which the child learns. Although Carol gives evidence of resourcefulness and cooperation, unless the work is challenging and interesting there will be times when she will display stubbornness. Attentive, independent, and inquiring, she reads especially well, and is a good writer. Popular, and a leader among her playmates, she does strive for recognition from the group, and plays up to the boys. Very active and energetic, she is of a very highstrung temperament, and displays nervousness at times, which may account for her being difficult to restrain in certain instances. Since the beginning of school, in the first grade, Carol's health record has noted a throat condition which needs attention.

Carol's mother is a graduate nurse and at present her father is employed as a salesman. It is necessary for her father to be away from home about two weeks out of the month, but even on these occasions he will be home week-ends. The family has resided in a very fashionable, well-furnished home since Carol was a year old, and on two occasions the family spend the winter in a trailer in Florida. The mother has never been particularly active, but she remarked on how extremely fond her husband is of playing with Carol, and with the two dogs - the two of them have great times together.

During six months of breast feeding, Carol was reported to have had colic, and slept rather poorly, but since her first birthday her sleeping and feeding habits have been of no concern. For a few months, when Carol was 3 1/2 years of age, she started to stammer, but this has been outgrown.

Aside from having measles at three years of age, there have been no instances of illness or injury.

At nine months, Carol started to waddle about, and once climbing out of the play pen, she had to be left to run about the yard. An extremely active child, Carol has only a few playmates, due to the sparsely populated area in which she lives. Her mother pictured her as one difficult to make sit quietly, and she is always playing with the two dogs, or running about in the large yard and woods surrounding the house. Ice skating, roller skating, riding tricycles, and now a bicycle, are her main interests, although she does read a great deal and listen to the radio, and also knit.

From the time Carol was about three years old, her mother has had an older girl come and stay with her on the evenings when her husband is away. Carol enjoys this, for then she has a close playmate in the evenings.

Carol goes to the playground rather infrequently, for when the family is not off in the trailer, she attends a summer day camp. Her father has set up a swing, chute, rings and bars for her to play with, and together father and daughter spend a great deal of time actively outdoors. Quite regularly, the father will play his violin and Carol the piano, picturing a rather wholesome and fine home relationship.

Not caring especially for dolls, Carol does have a play room in which she'll play house, and she also has regular house duties to perform. Her mother closed the interview with this remark - "All in all, she's had pretty much everything a child needs, and seems to have a pretty good time with all that she does."

Case M-1

"A nice youngster", was the teacher's comment. A slow reader, and poor writer, Edward was kept back in the third grade. He appears anxious about his school work, and wants to learn, in spite of his handicaps. He is calm, cooperative, attentive and very popular with others, was a further description. Very active out on the playground. Because of his ability, he is always a leader in the games, and being a year older than his classmates, he is respected.

Notations on his health record drew attention remarks on a feet and spine deviation, and a note was sent home concerning a possible hearing difficulty. Edward had attended kindergarten, and throughout the first three years of schooling, had had throat, nose and glands checked as needing attention.

Edward's mother is a graduate nurse, and his father a steel worker. His father was in the service for three years, and only during this time has the mother practiced nursing, and this only occasionally. When Edward was three, the family moved from Belmont, and since then, have always lived in a large two-family house.

During pregnancy, Edward's mother had sleeping sickness, and it was necessary for the child to be delivered by forceps at birth. When Edward was six, his mother also became very seriously ill with pneumonia. The child himself contracted chicken pox at four years of age, and measles at seven. Asthma was quite a marked condition when Edward was two years old, and at three and one-half years of age he had his appendix removed. While experiencing the asthmatic condition, his sleep was irregular and restless, but within a year's time this disturbance was outgrown. The regularity of sucking his thumb while going to sleep ceased after two years of age.

The only marked instances of a nervous condition were within the past few years, when Edward would stammer, and this seemingly brought on an irritable condition in which he'd become very uneasy.

There are quite a few youngsters in the neighborhood, and with Edward, they have formed their own club. He has one really close pal, a boy a bit older. At school he'll play with his own classmates, and after school he is with them and the other group. Especially active, the group is always playing football, baseball, tobogganing, and the like. On rainy days, he will have his friends in, and they will play pool, box, and make things in the play room.

Edward didn't begin to walk until he was fourteen months old. His main interest in early years was with wheel toys, pounding tables, and anything he could take apart. Roller skating and ice skating were a little difficult at first, but now skating and using his bicycle are favorites. Skiing is also a rabid interest.

The house looks out onto the school playground, and here Edward spends all his time playing games, tennis, skating, and so on.

In the summer, he visits on a farm for a few weeks, and together with both his mother and father, takes trips and goes to baseball games.

The father is extremely active with Edward, playing ball with him, boxing, wrestling, etc.

An older woman lives in the house with the family, and his mother reported his being very nice to her, often doing things for her. He has regular household duties, and helps around the yard. With his father, he'll make things, fix the fence, and the like, being interested in doing mechanical work.

His mother allows him to climb about on trees, but when it came to jumping off the garage roof, she put her foot down. There did not appear to be any over-protection on the part of either parent.

The numerous number of toys and play materials is a result of the mother's concern after Edward's illness at three and a half years. Aware of a posture condition, she provided all kinds of material to be used actively, and the father, in a like manner, gave much time to the youngster. The set of books, child encyclopedia, and toys, give real evidence of the parents' interest in the child's development.

Case M-2

An outstanding pupil, Paul was described as having a very nice handwriting, and was in the highest division in reading. Since kindergarten, he had been marked in all of his school work with A's, and in the teacher's evaluation of his learning ability he was given "excellent".

Very active both in and around school, Paul plays with the older boys, being an especially good athlete. He's popular, well-liked, and gets along well with all the children. He's a leader in the group, and is characterized by his teacher as being resourceful, calm, cooperative, attentive, anxious, imaginative and independent. Very inquiring, if he doesn't understand, he asks intelligent questions to find out the answers.

At present, the family lives in a rather rundown house, and it was quite untidy. The father is out of work, although

he is an auto mechanic. The mother works as a waitress. Neither of the parents finished high school, both leaving at the end of the second year. The mother doesn't appear particularly interested in sports, with all the children to care for, but the father was captain of the hockey team in high school, and has always played baseball.

Paul has one sister older than himself, and three younger. His mother described him as being very good with the other children, although he does not play with them to any great extent.

Always a healthy eater, he has never displayed any eating difficulties. He sleeps well, being in bed by eight o'clock each night. Last year at camp, the social stigma finally terminated his thumb-sucking. Having the general run of childhood illnesses, up until he had his tonsils out he did have colds rather frequently.

Paul has always tended to find older playmates, because the other boys don't play baseball, and the like, as well as he. No particularly close pal, he plays with a group of boys in the neighborhood. His real interests are sports of all kinds. He belongs to the "Y", and swims there a great deal. Outdoors whenever possible, he ice skates, roller skates, and rides his own bike. Saturdays are movie days for him, and unless he stays and works around the house with his father, this is the general rule.

Enjoying crayoning, and now drawing, on rainy days he will tend to spend his time in a quiet manner. Together, he and his father have built soap-box cars, and made many craft articles.

Paul attended the Salvation Army summer camp last year, and prior to that, would spend two weeks at a lake in the summer time. The playground being a little far from home, he only occasionally plays there, largely spending his time on the play areas on the riverway.

The father and son appear to enjoy a real close relationship. The mother commented on their going to get haircuts together, going fishing, and playing baseball with the other boys in the neighborhood.

The area about the house is well suited to play activities, and the youngster appears to have taken full advantage of the trees to climb, and space to run about. The family has lived here for three years, and although the house itself isn't particularly attractive, the mother was pleased about the opportunity the type of neighborhood afforded for her children to play.

Case M-3

"An active youngster, never seeming to tire, he just can't sit still," was the comment of the teacher. A good reader, excellent writer, Paul was pictured as an especially good student, learning fast and understanding easily. A fine sense of humor, he works well alone, is cooperative, attentive and inquiring. In keeping with his fidgeting, he was spoken of as being a little tense.

Playing largely with members of his own class, he is seen to be quite popular and a leader amongst the group. In the latter sense, he is apt to be a little forceful, due to his extreme desire to be the leader, but this is accepted by the group.

The father completed grammar school, while the mother attended high school for one year. At present the father is employed as a plumber. The family has resided in Watertown since the child's birth, and the last two years in the present single-family house. The mother is active in a church club, and skates and swims with the boys, indicating active interest in athletics. Although the father is not athletically inclined, he spends much time with boys in the yard and about the house. Paul has an older brother of ten, and a younger brother of fifteen months.

The only marked condition, as far as health is concerned, aside from the regular run of childhood sicknesses, was a condition of bronchial asthma, which lasted for two months, when Paul was two years old.

A good sleeper and eater, at times he may be fussy about his food. The mother is aware of the extreme activity of her youngster, and remarked on how high-strung he is.

There are five really close playmates with whom Paul spends his after-school time. There aren't too many children in the neighborhood, but this group plays pretty much together. One boy, in particular, is a real close pal.

On the whole, he seems to play in a random fashion, being interested in everything. Not too interested in baseball, the group builds huts, climbs around the cliff and trees, and in general, races about. Carts, wagons, and his bike are the most cherished and interesting play materials. Roller skating and ice skating are enjoyed, but coasting and playing cops and robbers is the big interest, plus playing rough-house football.

In the cellar, on rainy days, Paul will put on magic shows for the group, and show his puppets. Otherwise, they'll be wrestling or playing about the house. Banging with pots and pans, climbing around the furniture, were infant interests, and this has seemingly carried over into early childhood. Hammering and nailing are resorted to when alone, as well as building things with toys.

When seven years old, Paul went to a private camp for two weeks, but didn't like it. Now, the family takes trips and goes off for week-ends. With a family of all boys, the mother said her husband was very active with them, spending much time boxing and fooling with them, going out into the yard and playing catch, kicking a football, and mowing and raking the lawn together.

Paul enjoys trying to cook, and helps with the dishes and setting the table, and "All in all", the mother remarked, "we have quite a time together."

The house was rather modest, and certainly lived-in. Toys, airplanes, and the like, were around the room, and outside, a swing and play area were developed. Although the other home was described as being better located and better suited for play, the boys are provided for in the present home with what the father has arranged.

"He's quite a mischievous one," was the mother's remark, "but a pretty good boy, certainly a real boy."

Case M-4

A school record of all A's since kindergarten, Harvey reads and writes well, and is spoken of as being an excellent learner. "A bright pupil, he retains the material more than the others," was the teacher's description. Very active and alert, he does show little nervous traits, such as blinking his eyes and biting his lips. "He's anxious, inquiring, independent, attentive, cooperative and resourceful," the teacher evaluated.

A good mixer; in that he attempts to dominate the group at times, he's a leader without followers. A good team player, and very energetic, there was a little concern over his activeness when a heart condition was reported in the first grade.

Both parents completed high school, and the father is at present employed as a bank clerk. The father has been

In the cellar, on rainy days, Paul will put on magic shows for the group, and show his puppets. Otherwise, they'll be wrestling or playing about the house, bending with pots and pans, climbing around the furniture, were infant interests, and this has seemingly carried over into early childhood. Hammering and nailing are resorted to when alone, as well as building things with toys.

When seven years old, Paul went to a private camp for two weeks, but didn't like it. Now, the family takes trips and goes off for week-ends. With a family of six boys, the mother said her husband was very active with them, spending much time boxing and fooling with them, going out into the yard and playing catch, kicking a football, and mowing and raking the lawn together.

Paul enjoys trying to cook, and helps with the dishes and setting the table, and "All in all," the mother remarked, "we have quite a time together."

The house was rather modest, and certainly lived-in. Toys, airplanes, and the like, were around the room, and outside, a swing and play area were developed. Although the other home was described as being better located and better suited for play, the boys are provided for in the present home with what the father has arranged.

"He's quite a mischievous one," was the mother's remark, "but a pretty good boy, certainly a real boy."

Case 2-4

A school record of all A's since kindergarten, Harvey reads and writes well, and is spoken of as being an excellent learner. "A bright pupil," he retains the material more than the others," was the teacher's description. Very active and alert, he does show little nervous traits, such as blinking his eyes and biting his lips. "He's anxious, inquiring, independent, attentive, cooperative and resourceful," the teacher evaluated.

A good mixer; in that he attempts to dominate the group at times, he's a leader without followers. A good team player, and very energetic, there was a little concern over his aggressiveness when a heart condition was reported in the first grade.

Both parents completed high school, and the father is at present employed as a bank clerk. The father has been

especially active in church work, and although he did not compete in high school sports, at summer camp and now around the neighborhood, he plays baseball and the like.

The mother described Harvey's eating habits as being difficult, only because she can never fill him up. Feeding was a little problem in infancy; his being fussy, he had to be fed egg yolk and oatmeal to fill his needs.

Harvey has a younger sister, age four, and he is very good with her. "With the father, the two children have quite a time together," was the mother's comment.

The majority of the children with whom Harvey plays in the neighborhood are older than Harvey, although there are quite a few younger children in the vicinity. He has one boy his own age with whom he chums around, but generally he plays in a group.

His play tends to be of a random nature, and in this he appears to direct the group activities. Baseball, football, and team games are played most frequently, although there are times when he merely plays. On Saturday mornings, Harvey likes to stay in bed and color, or make airplanes - activities of a manipulative fashion. Roller skating, skiing, using his scooter, bike and wagon, are the big interests. Crayoning, using his tool chest and making things are interests for a short span on a rainy day; otherwise, he fools with his sister or plays with his wheel toys or trains in the play room.

The playground being too far for him to utilize, Harvey spends his time on the riverway, it providing an excellent place for the children to play. In the summer, the family takes trips, but generally they remain at home for the greater part of the time. Both parents actively play with the child, being very much interested in his development. They go to all parent-teacher meetings, and have taken an active part in the community.

The father described Harvey's play as being more creative than abstract, losing interest once the challenge is gone. During the war, when his grandmother lived with them, he was very attentive to her, and helped about the house. He seems to enjoy older people and their company.

"He's always been terribly intense in his interests," his father explained, "whether it lasts for a short or long duration." When he's not off running around, climbing here

essentially active in church work, and although he did not connect in high school sports, at summer camp and now around the neighborhood, he always resembles and the like.

The mother described Harvey's early habits as being difficult, only because she can never tell him up. He was a little bit of a trouble maker; his being busy, as had to be for his own sake, to fill his needs.

Harvey has a younger sister, age four, and he is very good with her. "With the father, the two children have quite a time together," was the mother's comment.

The majority of the children with whom Harvey plays in the neighborhood are older than Harvey, although there are quite a few younger children in the vicinity. He has one boy his own age with whom he comes around, but generally he plays in a group.

His play tends to be of a random nature, and in this he appears to direct the group activities. Baseball, football, and some games are played most frequently, although there are times when he merely plays. On certain mornings Harvey likes to play in bed and color, or make airplanes - activities of a manipulative nature. Roller skating, skiing, using his scooter, bike and wagon, are the winter sports. Growing, using his tool chest and making things are interests for a short span on a rainy day; otherwise he fools with his sister or plays with his wheel toys or trains in the play room.

The playground being too far for him to utilize, Harvey spends his time on the riverway, it providing an excellent place for the children to play. In the summer, the family takes trips, but generally they remain at home for the greater part of the time. Both parents actively play with the child, being very much interested in his development. They go to all parent-teacher meetings, and have taken an active part in the community.

The father described Harvey's play as being more creative than other children, losing interest once the challenge is gone. During the war, when his grandfather lived with them, he was very active to her, and helped about the house. He seems to enjoy other people and their company.

"He's always been terribly intense in his interests," his father explains, "whether it lasts for a short or long duration." When he's not off running around, climbing here

and there, the child and his father play ball together, and work around the house.

A wholesome attitude was recognized when the father described Harvey as being interested in everyone and everything.

Case M-5

The immediate comparison drawn by the teacher was that he was better in all aspects than his twin brother. Although he reads only fairly well, he writes well, and is a good learner. At times, he seems very placid, and day dreams, and for that reason causes a little difficulty in the classroom, as well as always teasing the girls on the playground. "He does well enough," the teacher commented, "but he's capable of being one of the leaders in the class."

Somewhat passive in the classroom, he is rather calm, independent, and will act shy, but isn't. To a degree, he's cooperative, but he is not very attentive.

He's especially popular with the other children, is energetic and active on the playground, plays well, but doesn't carry this into the classroom.

Notation was made on the health record of his nose, throat and glands requiring attention. Tonsils not removed.

The mother and father both attended high school, the father completing only three years. As a construction man, the father has his own business. He was in the service for two years. The mother worked for about three years in the evenings when the children were very young, but not since they were four years old. Wayne has an older brother, eleven years of age.

The father was burned very seriously and had to convalesce for six months. This was when the mother went to work.

Both parents are extremely active. The father played football, baseball, in high school, and even now plays baseball for a team. The entire family, living on a lake, goes boating, hiking, and swimming together.

The mother gave a sharp comparison between the twins, remarking on how well Wayne ate, slept, and ward off colds, being healthier than the other boy. "It seemed," she re-

and there, the child and his father play ball together, and work around the house.

A wholesome attitude was recognized when the father described Harvey as being interested in everyone and everything.

Case M-5

The immediate comparison drawn by the teacher was that he was better in all aspects than his twin brother. Although he reads only fairly well, he writes well, and is a good learner. At times, he seems very placid, and daydreams, and for that reason causes a little difficulty in the classroom, as well as always teasing the girls on the playground. "He does well enough," the teacher commented, "but he's capable of being one of the leaders in the class."

Somewhat passive in the classroom, he is rather calm, independent, and will not shy, but isn't. To a degree, he's cooperative, but he is not very attentive.

He's especially popular with the other children, is energetic and active on the playground, plays well, but doesn't carry this into the classroom.

Notation was made on the health record of his nose, throat and glands requiring attention. Tonsils not removed.

The mother and father both attended high school, the father completing only three years. As a construction man, the father has his own business. He was in the service for two years. The mother worked for about three years in the evenings when the children were very young, but not since they were four years old. Wayne has an older brother, eleven years of age.

The father was burned very seriously and had to convalesce for six months. This was when the mother went to work.

Both parents are extremely active. The father played football, baseball, in high school, and even now plays baseball for a team. The entire family, living on a lake, goes boating, hiking, and swimming together.

The mother gave a sharp comparison between the twins, remarking on how well Wayne ate, slept, and weighed off solids, being healthier than the other boy. "It seemed," she re-

marked, "that Wayne wasn't half so bothered when the two were ill with measles and the like, as the other boy."

The two are inseparable pals, and have a number of friends, many of whom are older. Whereas Wayne will want to run around and be outdoors, the other is more apt to want to stay in, but will stay with his brother. On rainy days, they'll play together, but where Wayne will want to play with wheel toys, play cops and robbers, and generally run around the house, the other will be content to crayon and use games. Both have house duties, and they take care of the lawn and around the house with the older brother.

Wayne has always liked toys that he could bang and make noise with. Wagons, kitty car, tricycle and any moveable toys were his favorites. Since his second year, he has dived and swum. The other child does neither of these. He skates, rows, plays baseball, and enjoys anything athletic.

The father is especially good with all the boys. He takes them on his truck on Saturdays, wrestles, plays ball and boats with them. They have made soap-box racers together, and have painted together.

The mother made the comment that "they are little devils", in speaking of the twins. They go off in the woods near the house, and have even walked the half mile to the playground alone. Very attractive and personable youngsters, older people take to them, and with thirteen brothers and sisters who visit frequently, the two associate frequently with older people.

The mother said she has never been able to keep them from wandering off, but they never seemed to get into too much trouble. Although the present house is rather poor, they used to live on the other side of the lake, up to this year, and had everything with which to play.

All of the family are great walkers, and this is a regular activity. It appears that the entire group has an outdoor-mindedness, especially with the parent interest.

Case F-6

High scholarship throughout kindergarten and the first three grades, Marie has a good handwriting, and reads well. Her teacher described her as an excellent learner and pupil.

marked, "Just Wayne wasn't half so bothered when the two were ill with measles and the like, as the other boy."

The two are inseparable pals, and have a number of friends, many of whom are older. Whereas Wayne will want to run around and be outdoors, the other is more apt to want to stay in, but will stay with his brother. On rainy days, they'll play together, but where Wayne will want to play with wheel toys, play cops and robbers, and generally run around the house, the other will be content to crawl and use games. Both have house duties, and they take care of the lawn and around the house with the older brother.

Wayne has always liked toys that he could bang and make noise with. Wagon, kiddy car, tricycle and any movable toys were his favorites. Since his second year, he has dived and swum. The other child does neither of these. He skates, rows, plays baseball, and enjoys anything athletic.

The father is especially good with all the boys. He takes them on his truck on Saturdays, wrestles, plays ball and boats with them. They have made soap-box racers together, and have painted together.

The mother made the comment that "they are little devils", in speaking of the twins. They go off in the woods near the house, and have even walked the half mile to the playground alone. Very attractive and personable youngsters, older people take to them, and with thirteen brothers and sisters who visit frequently, the two associate frequently with other people.

The mother said she has never been able to keep them from wandering off, but they never seemed to get into too much trouble. Although the present house is rather poor, they need to live on the other side of the lake, up to this year, and had everything with which to play.

All of the family are great walkers, and this is a regular activity. It appears that the entire group has an outdoor-mindedness, especially with the parent interest.

Case 7-8

High scholarship throughout kindergarten and the first three grades. Maria has a good handwriting, and reads well. Her teacher described her as an excellent learner and pupil.

An active child, she tends to be quiet and retiring in the classroom. She's much more mature than the other girls, and is somewhat introverted, according to her teacher. Affectionate, cooperative, resourceful, imaginative, attentive and shy, she is a good follower, enjoys playing the games, but is more reserved and withdrawn than the usual child. She'll either stay in company with the teacher when in a group trip, or with older girls.

Defective vision was observed in the first grade, and her sight as recorded in that instance was 20/50 for both eyes. Now her corrected vision is 20/30.

Marie's mother and father both have college degrees. The mother attended teachers college, and the father a law school, the profession which he now practices.

The father's comment was that he always had to work, and did not have much time for sports, although he's a good fan. The mother, however, has always been interested in athletics, and even now is a troop mother in the Brownies. She admitted to an infrequent active participating role in sports, now.

Marie's mother spoke of the birth as being very difficult, the child being turned around, and a rather serious eye inflammation, lasting for two months, followed birth.

A poor nurser, Marie is now a small, fussy eater, willing even to miss meals, being that unconcerned about food. An energetic sleeper, tossing and turning about, up until she was four years old Marie sucked her arm while falling asleep.

In spite of a torn ligament in her ankle at two years, and a broken nose at five years, she has had but measles and whooping cough, although the measles were contracted at seven months. Pneumonia also was rather severe at three years.

Marie tends to play with a few older girls in a group rather than develop any one particular pal. She'll play outdoors or in; enjoys such activities as playing grown-up, and visiting her aunts, or just taking trips. Dolls are a real interest, and the tricycle was for a time. Marie ice skates and roller skates; doesn't jump rope much or play hop scotch. When five years old, she studied tap dancing, but discontinued this at seven. She can swim a bit, but mostly stands around watching others - even with her mother at the pool.

An active child, she tends to be quiet and retiring in the classroom. She's much more mature than the other girls, and is somewhat introverted, according to her teacher. Affectionate, cooperative, respectful, imaginative, attentive and shy, she is a good follower, enjoys playing the games, but is more reserved and withdrawn than the usual child. She'll either stay in company with the teacher when in a group trip, or with older girls.

Detective vision was observed in the first grade, and her sight as recorded in that instance was 20/50 for both eyes. Now her corrected vision is 20/30.

Maria's mother and father both have college degrees. The mother attended teachers college, and the father a law school, the profession which he now practices.

The father's comment was that he always had to work, and did not have much time for sports, although he's a good fan. The mother, however, has always been interested in athletics, and even now is a troop mother in the Brownies. She admitted to an intermittent active participating role in sports, now.

Maria's mother spoke of the birth as being very difficult, the child being turned around, and a rather serious eye inflammation, lasting for two months, followed birth.

A poor nurse, Maria is now a small, fussy eater, willing even to miss meals, being that unconcerned about food. An energetic sleeper, cooing and turning about, up until she was four years old Maria sucked her arm while falling asleep.

In spite of a torn ligament in her ankle at two years, and a broken nose at five years, she has had but measles and whooping cough, although the measles were contracted at seven months. Pneumonia also was rather severe at three years.

Maria tends to play with a few older girls in a group rather than develop any one particular pal. She'll play outdoors or in; enjoys such activities as playing grown-up, and visiting her aunts, or just taking trips. Dolls are a real interest, and the tripole was for a time. Maria likes skates and roller skates; doesn't jump rope much or play hop scotch. When five years old, she studied tap dancing, but discontinued this at seven. She can swim a bit, but mostly stands around watching others - even with her mother at the pool.

During the summer she goes to a day camp for a few weeks, as well as the lake. The family will go to the beach occasionally. Although the playground is fairly near, Marie does not like to go there, except to do craft work, and because of the larger boys there, the mother restricts her visits.

The mother remarked on how Marie seems to tire rather easily, and complains occasionally of a sore ankle.

At three months, the mother claims the child could stand alone, and could walk at eight months; yet she referred to an apparent awkwardness now in doing many play activities.

An interesting comment was mentioned, in which Marie said that her mother played with Larry, her seven year old brother, more than with her. This may be, for the little boy has had a brain tumor, and in that he's returned from "Death's door", he is apt to be made more of than the girl.

Living in a modest single family house, Marie has sufficient area about the house in which to play, but has little interest in helping to work about it. Her activities are restricted more to passive and manipulative, than gross and active.

Case F-7

Repeating the first grade, Lois now is reported to read fairly well, but write only fair. "She learns easily," was the teacher's comment, but tends to be inattentive. The teacher described her as "less active in class than outside, she is fairly active, although much of this is letting off her nervous tension." Inclined to be a little stubborn, she's also pictured as being calm and imaginative.

She gets along well with others, and is somewhat aggressive in this respect, being attracted to and playing with younger boys. "Likes to be in the limelight," was another comment, "and yet she has no outstanding ability."

There was a question as to a possible vision defect in one eye, 20/30, and a note was sent home in regard to her tonsils.

Both parents went to high school, the mother completing three years, the father two. The mother mentioned her husband being home only a little, as he's a cab driver, but even when he was a machinist, this was true. The mother was

quite explicit about neither parent being athletically inclined or interested.

Feeding and eating response has always been very poor, her mother noted. Lois had measles when only a few months old, and had quite a difficult time with a dislocated shoulder last year.

A brother, fourteen years of age, has been kept back in the seventh grade, and is a real problem to his mother.

Lois does not play at all with her brother, and restricts her playmates to one younger girl, even though there are quite a few children in the neighborhood.

She likes to visit, play with dolls, and dress like a grown-up. She can roller skate, but has never tried other toys like this.

Movies are a regular occasion, and she tends to spend as much time indoors as out. The yard about the house is very small, and the playground too far away; as a result, when she plays outdoors, it's on the sidewalk.

Her summers are spent at home, and her mother frankly admitted that she didn't know how to occupy her time. "Her father doesn't spend any time with her, and I don't know how to interest her," was the mother's comment. "At least, she's not a problem, like my son," was a further remark.

Although the mother thought she might be a little over-protective with the child, restricting her running around and the like, the child was not apparently dominated, as she came into the room with lipstick on, and paid no attention to her mother telling her to go out and play.

Case F-8

"A scatterbrain," was the teacher's comment. Below average in reading and writing, she is described as a poor learner, and rather slow mentally. Talkative, stubborn, inquiring, tense and imaginative, she does try to cooperate. "Nervous, jumping around in her chair and fidgeting, she's quite an active child," was a further remark.

Aggressive in her play relations, she pushes herself boldly into the group, and when rebuffed, is rather timid. One younger girl in the second grade is a close companion.

quite explicit about neither parent being aesthetically inclined or interested.

Feeding and eating response has always been very poor, her mother noted. Lois had measles when only a few months old, and had quite a difficult time with a dislocated shoulder last year.

A brother, fourteen years of age, has been kept back in the seventh grade, and is a real problem to his mother.

Lois does not play at all with her brother, and restricts her playmates to one younger girl, even though there are quite a few children in the neighborhood.

She likes to visit, play with dolls, and dress like a grown-up. She can roller skate, but has never tried other toys like this.

Movies are a regular occasion, and she tends to spend as much time indoors as out. The yard about the house is very small, and the playground too far away; as a result, when she plays outdoors, it's on the sidewalk.

Her summers are spent at home, and her mother frankly admitted that she didn't know how to occupy her time. "Her father doesn't spend any time with her, and I don't know how to interest her," was the mother's comment. "At least, she's not a problem, like my son," was a further remark.

Although the mother thought she might be a little over-protective with the child, restricting her running around and the like, the child was not apparently dominated, as she came into the room with lipstuck on, and paid no attention to her mother, telling her to go out and play.

Case 7-8

"A scatterbrain," was the teacher's comment. Below average in reading and writing, she is described as a poor learner, and rather slow mentally. Talkative, stubborn, in-quieting, tense and imaginative, she does try to cooperate. "Nervous, jumping around in her chair and fidgeting," she's quite an active child," was a further remark.

Aggressive in her play relations, she pushes herself boldly into the group, and when rebuffed, is rather timid. One younger girl in the second grade is a close companion.

The mother was born in Canada, and finished her grammar school education there. The father finished grammar school in Boston, and went to work as a carpenter. During the war, he worked away from home, in the camps and shipyards.

Neither parent has had any particular interest in athletics - "certainly not now," was the mother's remark. The father had been sick for nearly three months last year, and was kept in bed during that time.

Mildred has always been a good eater, but she never seems to get enough rest and sleep. "Perhaps that's why she is always tired," was the mother's comment.

Described as a very fat baby, she was sixteen months of age before she started to walk. She fell downstairs when she was 2 1/2 years old, and had a narrow escape when she was seven, falling off the piazza.

Her close playmates are a boy and girl younger than she. There are only a few children in the immediate neighborhood, and these are mostly younger boys. She is in between being active and passive. She likes to play house and school, spends time with dolls, crayoning and reading; and she likes to run around playing hide-and-seek, and roller skate.

As a child, Mildred liked to color, play with a peg board and beads, but this was a passing fancy. Now she likes to spend rainy days doing sewing on printed cloth, and reading, although she does not read well. Her Brownie Club work interests her, and she attends this regularly.

She helps around the house occasionally, although her playroom is always untidy. A nice yard to play in, Mildred spends her time about the house, not going to the playground, which is very handy. In the summertime, she goes to the country for a couple of weeks, and here has an older boy with whom to play.

Her mother remarked on her awkwardness in jumping rope, and trying to swim, even having difficulty playing catch, yet commented on her always dancing about the house.

Left pretty much on her own, Mildred has little provision of toys to promote gross activity, and her parents do not appear to spend much time with her.

The family has a very fashionable house, and it is kept very neat. To a degree, the mother said she may be a little

protective, especially since the last bad fall which the child had. "She's quite an inquisitive one," was her mother's remark, "wish she's pick up more in school and surprise us."

Case F-9

Although Susan reads rather well, and writes excellently, she's a rather slow, deliberate learner, according to her teacher. A 'B' student, she's described as a good pupil, being calm, attentive and cooperative. More of a passive child, she has little habits of twisting her hair and rocking back and forth in her chair.

Well liked by others, she appears a little bossy in wanting to be a leader, but this is accepted by others. She is quite large for her age, and for this reason she is able to play more with the boys, and enjoys this relation.

The mother was a trained kindergarten teacher, although she never taught. The father went into the Navy on leaving the eighth grade. At present, the father is an asbestos insulator, and this work takes him away from the home for months at a time. Up until she was five years of age, Susan lived in California with her mother and father, and had a real home there.

The birth of Susan was complicated, it being a dry birth, and peritonitis set in. Also, the child was not in the correct position. Difficulty with a drooping eye resulted from the birth. Even as a child, she had sleeping irregularities, and continues now to suck her thumb in falling asleep. Usually she tosses and turns about through the night.

A series of injuries commenced when Susan was six months old. Hit by a street car, she had the muscles of her head crushed, and a swollen head for some time. At 3 1/2 years, she fell out of her crib and broke her collar-bone, being in a brace for three months. The run of childhood illnesses, measles, chicken pox, whooping cough, all came within the fourth and fifth years. A condition of hives plagues her every spring and fall.

Susan has many playmates in the neighborhood to choose from, but has no particular close friend, although she tends to play with only one or two children rather than in a group.

Usually out of doors, she plays in a random manner, not skating too well, and not interested in her scooter. Playing grown-up and keeping house is a real interest. While quite young, she really enjoyed stringing beads and playing with dolls. A kitty car and tricycle were her favorite toys. She makes doll dresses, and weaves, seemingly enjoying manipulative, more passive activity. Reading and listening to the radio are favorite pastimes.

Often, her mother reports, she is overtired and becomes fussy. She will stay in bed and amuse herself with her dolls on these occasions.

Susan has joined the Brownies, and is fairly active. The playground, although fairly near, is infrequently used. In the summer, the family spends some time at a summer resort, but they remain at home the majority of the time. A near drowning experience has restricted her swimming to just paddling.

The yard about the house is very small, and necessitates her playing on the sidewalk. When her father is at home, they are great pals, and will play games, tennis and catch, together. The mother remarked on the apparent clumsiness in this activity, due to her large size.

Susan's grandmother lives with the family, and is very influential, tending to be a little protective and cautious, due to the unfortunate experiences which the child has already undergone.

She's a very generous child, her mother explained, considerate of the younger children, and has given many of her toys to her playmates. Seemingly a child with many handicaps, she has adjusted herself rather well.

Case F-10

"An especially good student," was the prompt response of the teacher. She reads well, writes well, and is an excellent learner. Her drawing is always on the board. She seemingly has a real desire to learn, according to her teacher.

She tends to tire, is a bit shy, and a little tense, is the evaluation of Eleanor, being pictured as resourceful, cooperative, attentive and anxious.

She gets along well with others, being popular and desired by others in their play activity. A good follower, she shows leadership ability, and demonstrates this in the

classroom.

The father is a college graduate, now employed as an electrical engineer. The mother completed high school, and worked as a typist until her marriage. Both parents have been, and are, quite active in athletic sports. The father has played semi-pro baseball, and the mother even now is a regular golfer. An anemic condition, however, lessens the extent of her activity, compared to what it was previously.

Feeding and eating irregularities have been noted in Eleanor since infancy. During nursing, the mother was quite concerned over the child's poor response.

Eleanor has a younger sister, six years old, and she is her main playmate. Most of the children in the neighborhood are either two years older or younger than Eleanor, and for that reason, she tends to spend her time with her sister.

Described as being in between active and passive in her play interests, Eleanor spends most of her time outdoors. Skating, riding her bicycle, jumping rope, playing house and coasting, are real interests. On rainy days, she plays very quietly, amusing herself, and with her sister plays school, and reads. As a young child, she loved to crayon and play with small toys. She makes her own doll clothes, and likes to crochet, illustrating her manipulative interest, which began as a child.

The mother remarked on the apparent difference in the two girls, in spite of their ages. While Eleanor is more reserved, cautious and rather awkward in playing games, bouncing a ball and the like, the other child is more capable, aggressive and active. The mother admitted to being a little over-protective, and explained that being the first child, she perhaps tended to be a little cautious.

It is interesting to note that when her father is home, Eleanor prefers to be with him. Together they will work around the house, but the main interest is in her father reading to her and playing mental games with her.

In the summer, the family usually stays at home. A lake is fairly close to the house, and there is a nice yard in which to play, and fields for walking and running about.

Eleanor stays pretty much at her own home, other children visit, and hardly ever does she go to the playground, which is very handy.

The father has provided a swing, sand box and lawn games, but Eleanor only spasmodically becomes interested in these.

A noteworthy point was brought out, in that the mother mentioned how much the child enjoyed playing house, playing mother to the younger children. "She's play that all the time if I didn't have her do something else," was the mother's remark.

As a secondary interest, then, it appears that skating and similar gross type activities are pursued.

Case M-6

Jimmy is pictured as being a fair reader and writer, somewhat below the average. A slow, poor learner, he is easily distracted and has very poor attention. It was necessary for him to attend a reading clinic, and the teacher remarked on his inability now to read well and express himself.

Retiring, shy, tense, he is an extremely nervous child. He is active, but tires easily. He squints, fidgets, and is always doing something with his hands.

Outside of the classroom, he is fairly well liked, definitely a follower, although his retiring attitude sometimes bursts into sieges of showing off. Seemingly, he lacks confidence, and in his bashfulness lapses into babyish ways.

Needed attention to nose, throat and glands has been recorded on his health record for the past two years.

Both parents attended high school, the father completing three years, the mother but the first year.

During the 3 1/2 years that the father was in the service, Jimmy's grandmother lived with them, and she apparently has been a decided influence upon him, as reported by the mother.

The father does not care much for sports, mainly interesting himself in hunting and fishing. As a painter, the father is apt to be away a few evenings and occasional weekends, but generally is able to spend the majority of his time at home.

The mother is quite interested in swimming, skating and bowling, continuing these interests now.

James is described as a very restless, energetic sleeper, tossing and turning during the night. His nervous-

ness is recognized by the mother, and she is equally concerned about his listlessness in school.

Although there are a number of playmates in his neighborhood, Jimmy spends the greatest part of his time with one or two other boys. He does spend a part of his play time with his 2 1/2 year old sister, and except for these occasions, he is definitely a follower in his play relations. He is both active and passive in his play, fluctuating between playing games and merely running around. Football, baseball and the like are passing fancies. He doesn't ice skate too well, has never had roller skates, and is learning to ride a bicycle now. On rainy days, Jimmy enjoys playing with trains, trucks, and coloring - mainly active play, although this is largely an expression of his nervous tension.

As a young child, the tricycle held little interest, as was true of blocks and wagons. The scooter, as the bicycle has become now, was the favorite toy.

Father and son work about the house together, mowing the lawn and carpentering, but rarely will play catch or games together. It has been the mother who has directed his interest in learning how to swim and ride a bike.

Frequenting the playground which is quite close to the house, more often, however, Jimmy will randomly play in the big fields near his home. Aside from a few picnics, in the summer Jimmy's time is spent pretty much in the same manner.

In keeping with the teacher's comment, the mother remarked on how responsive Jimmy is to his grandmother. Apparently it is the mother who spends the greatest share of the time in activity with the youngster, where the father will occasionally encourage a working session, and the grandmother quiet moments, wherein he is fondled and spoiled.

Case M-7

"A rather precocious, forward youngster," was the teacher's initial description. "Cute, but a bit of a sissy." Stanley is pictured as being rather tense, anxious, and a little nervous. He is very earnest, tries hard, but merits only fair in reading. His writing is poor, and he is a rather slow learner, having been in a reading class for over a year.

Not too readily accepted by others, his retiringness definitely places him in a follower class. He is very nice

to the girls, and when he is playing with the others, he chooses his own classmates.

Health records indicated that attention had been called to Stanley's throat and eyes. He is supposed to wear glasses at all times.

Mother and father are both college graduates. The father is managing a laundry, although he was in the hotel business for quite some time. Up to the last two years, the family lived in a hotel, apartment house, and the grandparents' home. At present, the family, including the mother's relatives, lives in a spacious, well-furnished and nicely located, single-style house.

Neither the mother nor the father has ever been particularly interested in sports, and neither has any inclination whatsoever for activity now.

Since first nursing, Stanley has always been a poor, fussy eater. Teething difficulty seemed to increase this behavior. He sleeps somewhat restlessly, the covers always being kicked around and the bed disrupted.

High-strung, nervous, he picks at his nails and constantly moves about. It was necessary to perform a Caesarian operation for his birth. He has had no major defects or injuries. Illness followed one after another in early childhood, and last year, his mother said, he was simply played out after the school year ended. Measles, and colds, contributed to this, she thought.

Generally playing with one child, Stanley enjoys younger children, especially babies. There are relatively few youngsters in the neighborhood, and these are mainly girls, with whom he plays.

His play habits are a combination of active and passive, organized and random qualities. Games will interest him for a while, or he'll be content to tinker around with his toys, trains, and take things apart. Generally, his play will be determined by his playmate. Blocks, crayons, carts and tricycle were early interests. He roller and ice skates only a bit, and has never had a scooter or bicycle. Dancing lessons were pursued for a half year, but he then lost interest. He does not swim, play baseball or football too well, but he is clever in sewing and working with tools.

When Stanley isn't about his own big yard, he is off in the woods. His mother prohibits his climbing trees, and

admitted being a little protective and restrictive about his play habits.

Up until last year, the family summered on a lake island, where there were no other children. Last year, the child spent his time at a day camp, and around the home.

Even though Stanley went to nursery school as early as two years of age, he has always been limited by the place in which the family lived, from having a great deal of contact with other children. He has always interested himself in playing with smaller children. The mother admitted that he had a minimum of parent-child activity, although he does help around the house, and out in the garden with his father.

Inasmuch as his grandparents are quite old, and the grandmother an invalid, his home activity is quite restricted, and this was explained by his mother as being the reason for his becoming interested in more manipulative than gross activity.

Case M-8

"Active outside the classroom, but a sitter inside, he seems to have a dual personality," the teacher remarked. Quite nervous and tense, up until this year he stuttered noticeably. A fair reader and writer, he learns very slowly and deliberately. Somewhat stubborn and inattentive, Robert is not apt to be cooperative.

Although he likes attention, he hangs back from the others, and would rather be by himself. Not too well liked by others, he is neither a leader nor a follower, remaining by himself or with younger children.

The health records noted his being put in the posture class, and having need for glasses.

Robert's mother attended a two-year business school after high school, and the father continues his electrical training in the evenings. Neither of the parents has been active in sports, and especially not since the birth of the children. Robert has a sister 2 1/2 years old, and his younger brother is 5 1/2 years of age.

Having a small appetite, Robert will at times even miss a meal, not being hungry, and he tends to be very fussy about what he eats.

There are relatively few children in the neighborhood, and they are younger than Robert. There is no one from his school grade, so Robert spends most of his time with his brother. He doesn't stay at any one thing over five minutes, his mother pictures, and he is generally just playing about. He likes to be read to, and enjoys listening to the radio, but on rainy days he races about the house.

Robert has always enjoyed banging things, enjoying blocks, hammer and pounding table. An erector set, and tool chest, are his cherished possessions. He did enjoy the kitty car, tricycle and scooter, and wants a bicycle now. Skating, jumping rope, and swimming have not been attempted, as yet.

Baseball and other skill games are not popular with Robert, for unless he knows he can do something well, he won't do it. He likes to play football, but is fearful about getting hurt. His father isn't able to spend much time with him, and his uncle becomes irritated when playing with him, because he shows interest for only a while, and always plays only what he wants to play.

Although the playground is nearby, and the summers are, for the most part, spent at home, Robert rarely plays at the playground. His home yard is his main play area, and here he helps around the house, enjoying an opportunity to display his mechanical inclination.

Robert's mother believed she was fairly liberal and unprotective, and explained his lack of interest in tree climbing, organized games, and the like, as being due to the inopportunities to play with others, and Robert's seemingly restricted ability.

Case M-9

A school record of all A's in conduct and effort, Henry had a C average in his school work. His reading and writing are only fair, and his learning is very slow and labored. A persistent worker, he is a very likeable and cooperative pupil. Shy, timid, and yet anxious, Henry was very retiring, and seemed to fatigue rather easily in his school play and work.

Well liked by other children, when not playing with the younger ones he was the object of considerable protectiveness on the part of his own classmates.

His health record, although giving no indication of the necessity for glasses, had a 20/30 recording for his vision.

Henry's parents were both born in Armenia, and had attended only the equivalent of our grammar school. The father operates a grocery store and has little time at home. Being of the old country culture, neither of the parents has had any athletic or sports interest, and home activity is somewhat restricted, for this same reason.

Eating has always been a problem with Henry, being very fussy and pickish with his food. When six months old, he had his leg severely burned on a stove, and at three years of age he fell downstairs and needed to have six stitches in his forehead. A year later, he was knocked down by a truck and was quite shaken up for some time.

Henry has two older brothers, one 21 years old, the other 16, and a sister 19. The sister is the only one not going to school, she having finished high school. She takes care of the house and looks after Henry.

There are but a few children in the neighborhood, mostly younger children, with whom Henry plays, and generally it is with one particular playmate. Most of the time he is outdoors, but as the yard is very small, he plays on the sidewalk. The playground is fairly close by, but he very seldom goes there to play.

In between being active and passive, mostly Henry will play cops and robbers, or play house with the girls and younger children. Roller skating and using his scooter are spasmodic interests. He has no ice skates, nor bicycle, and is afraid to learn to swim.

Crayons, tracing set, blackboard, teddy bear, puzzles and cut-outs were early play materials, and generally his interests and abilities have centered around manipulative skill. He was pictured by the sister as being very timid, and perhaps overly cautious. Not as rugged as his playmates, shy and protected, Henry didn't climb trees or run off, but stayed pretty much to home. In the summer, the family took a few trips, but mainly they remained at home.

The older boys are either too busy or disinterested to play with Henry, and as the older sister has spent the greatest amount of time with Henry, he hasn't developed a very aggressive nature.

It seemed as though, from looking at the home, which was very neat, with little evidence of activity, and the parental background, Henry experienced little direction or guiding influence in play activity, being left pretty much to himself and his surroundings.

Case M-10

Earl was pictured by his teacher as being a rather peculiar child. In spite of having a fairly high intelligence quotient, Earl was only a good reader, and a poor writer and learner. Very passive, retiring, in class Earl tended to be a day-dreamer one minute and an insistent talker the next.

He is apt to stutter, is nervous and high strung. Earl is described as being inquiring, imaginative and independent. He is accepted to a degree by the others, but in games is retiring and shy, and therefore reserved and often rejected.

The teacher was quite emphatic in remarking that Earl was not working up to his potentiality, and decidedly inferior in social relations.

Health records indicated a vision and hearing condition requiring attention, as well as teeth and feet.

Earl's mother is a high school graduate, the father a college graduate. The family lived, for the first three years of Earl's life, in Brooklyn, in an urban area, moving to Newton when the father took a position as manager of an insurance firm.

Neither of the parents has been particularly interested in athletics, although in the past they did skate, bowl and swim a little. At present, it is very rarely that the parents are active, the children taking up all of their time. Earl has an older sister ten years of age, and a younger brother 3 1/2 years of age.

Earl is described by his mother as being a very small, fussy eater. He is quite nervous, biting his nails, stammering, blinking his eyes, and he is very fidgety.

Earl spends the greater part of his time by himself. There are mostly girls in the neighborhood, which consists of few children. When he interests himself in play, it is usually with only one or two others. Most of his time is

spent indoors, listening to the radio, reading, crayoning or playing with blocks - even now. He is very quiet, and quite passive in his activity.

His interests have always been spasmodic, and never included gross active play. The kitty car, tricycle and roller skates have never been his main interests, and his sister's bicycle is no challenge to him. He has a pair of ice skates, but doesn't want to learn how to skate. Swimming is of no interest, and aside from taking dancing lessons for a year, he has received no instruction, and dislikes being told how to do things.

Earl has a playroom and home gym equipment, but is little interested in either. The mother tried to take him to a club, but he wouldn't go. He has gone to a summer day camp for three years, but doesn't like it at all. The playground is fairly near his home, but he's been there only twice.

Earl's mother is quite concerned over his behavior. She remarked that she is considering taking him to a child clinic or psychiatrist, because he is so unsocial and disinterested in play activity. "He's so unlike his sister and little brother," she remarked. Both of these children were extremely active and personable, compared to Earl.

Around the house, Earl has no responsibilities, and it is his sister who enjoys playing with the father, mowing the lawn and playing games.

Tiring easily, not interested in playing ball or the like, Earl is an odd child, being quite childish, enjoying playing with his sister's dolls, and being petted by his mother, more than associating himself with other children and playing their games.

BOSTON UNIVERSITY



1 1719 02544 6644

ACCOPRESS BINDER

BF 250-P7-EMB

Made By

ACCO PRODUCTS, INC.

Ogdensburg, N. Y., U.S.A.

